This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

B 1080739

THE UNIVERSITY OF MICHIGAN
1817
LIBRARIES

FORTY-SIXTH ANNUAL REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION

OF THE

STATE OF MICHIGAN,

WITH

ACCOMPANYING DOCUMENTS,

FOR

THE YEAR 1882.

BY AUTHORITY.

LANSING, MICH.:
W. S. GEORGE & CO., STATE PRINTERS AND BINDERS.
1883.

TABLE OF CONTENTS.

ANNUAL REPORT.

SUPERINTENDENT'S REPORT: PAGE.

Introductory, ... 5
Comparative Statistics, ... 6
The New School Law, ... 7
Examination and Supervision, ... 12
Relief of School Districts that Suffered in the Fires, ... 16
The Primary School Funds, ... 17
The University Fund, ... 18
The Agricultural College Fund, ... 18
The Normal School Fund, ... 19
Libraries, ... 19
Teachers' Institutes, ... 20
Meeting of County Examiners, ... 21
State Teachers' Association, ... 22
State Institutions, ... 23
Education in Penal Institutions, ... 29
Incorporated Institutions, ... 29
Conclusion, ... 30

STATISTICAL TABLES:

Comparative Statistics for the Years 1881 and 1882, ... 31
Apportionment of the Primary School Interest Fund, ... 34
General Statistics from Reports of School Inspectors, ... 36
Statistics respecting Employment of Teachers, ... 37
Resources of School Districts, ... 38
Expenditures of School Districts, ... 40
Miscellaneous Financial Statistics, ... 42
Township Libraries, ... 43
District Libraries, ... 45
Miscellaneous items from Inspectors' Reports, ... 46
Statistics relating to School-houses destroyed by Fire, ... 48
Examination and Certification of Teachers, ... 49
Miscellaneous Statistics of Boards of Examiners, ... 50
Graded School Statistics from Inspector's Reports, ... 52
Graded School Statistics from Superintendents' Reports, ... 59
Enrollment at Teachers' Institutes, ... 72
Financial Statement of Teachers' Institutes, ... 73
General Statistics of Educational Institutions, ... 74
Financial Statistics of Educational Institutions, ... 75
List of County School Examiners, ... 76

ACCOMPANYING DOCUMENTS.

	PAGE.
UNIVERSITY OF MICHIGAN:	
Report of the Board of Regents,	83
President's Annual Report,	88
Report of the School of Political Science,	95
Statistical Tables,	98
Terms on which Degrees are Conferred,	103
Instructions to Applicants for Higher Degrees,	106
Report of the Finance Committee,	106
STATE BOARD OF EDUCATION:	
Annual Report,	118
The Normal School,	118
State Certificates,	123
Library Books,	124
Examination Questions,	129
Report of the Acting Principal of the Normal School,	130
Report of the Visitors to the Normal School,	137
Financial Statement,	138
STATE AGRICULTURAL COLLEGE:	
Report,	143
INSTITUTION FOR EDUCATING THE DEAF AND DUMB:	
Report of the Trustees,	146
MICHIGAN SCHOOL FOR THE BLIND:	
Report of the Superintendent,	152
MICHIGAN STATE REFORM SCHOOL:	
Report of the Board of Control,	154
MICHIGAN REFORM SCHOOL FOR GIRLS:	
Report of the Superintendent,	160
STATE PUBLIC SCHOOL FOR DEPENDENT CHILDREN:	
Report of the Board of Control,	164
ADRIAN COLLEGE:	
Report of the President,	183
ALBION COLLEGE:	
Report of the President,	186
DETROIT COLLEGE:	
Report of the President,	189
DETROIT MEDICAL COLLEGE:	
Report,	192
HILLSDALE COLLEGE:	
Report of the Visitors,	195
HOPE COLLEGE:	
Report of the President,	196
KALAMAZOO COLLEGE:	
Report of the President,	201
Report of the Visitors,	202
OLIVET COLLEGE:	
Report of the President,	204
Report of the Visitors,	212
MICHIGAN FEMALE SEMINARY:	
Report of the Visitors,	213
MICHIGAN MILITARY ACADEMY:	
Report of the Superintendent,	215
Report of the Visitors,	217

PAGE.

MONROE YOUNG LADIES' SEMINARY:
Report of the Principal, ... 220
RAISIN VALLEY SEMINARY:
Report of a Visitor, ... 221
SOMERVILLE SCHOOL:
Report of the Visitors, ... 222

DECISIONS OF THE SUPREME COURT.

APPOINTMENT OF SCHOOL TEACHER:
Hazen *vs.* Lerche, ... 225
REMOVAL OF SCHOOL DISTRICT MODERATOR:
Hazen *vs.* Township Board of Akron, ... 225
AUTHORITY OF DIRECTOR TO PURCHASE APPARATUS:
McLaren *vs.* Township Board of Akron, ... 226
APPEALS FROM BOARD OF INSPECTORS:
Cannon *vs.* Wilcox, ... 226
PROCEEDINGS TO REMOVE A DISTRICT OFFICER:
Wenzel *vs.* Township Board of Dorr, ... 228
CONDEMNATION OF SCHOOL-HOUSE SITE:
School District No. 5, of Delhi *vs.* The Circuit Judge for Ingham, . . 229
RE-FORMATION OF SCHOOL DISTRICTS:
Parman *vs.* Boards of Inspectors, ... 230

MEETING OF COUNTY SCHOOL EXAMINERS.

PAPERS AND DISCUSSIONS:
Certificates: Their Grades and Requirements, ... 233
How to Secure Classification and Grading in District Schools, ... 239
The Secretary: His Duties and Responsibilities, ... 244
Ends to be Attained and Methods to be used by Examiners, ... 248

STATE TEACHERS' ASSOCIATION.

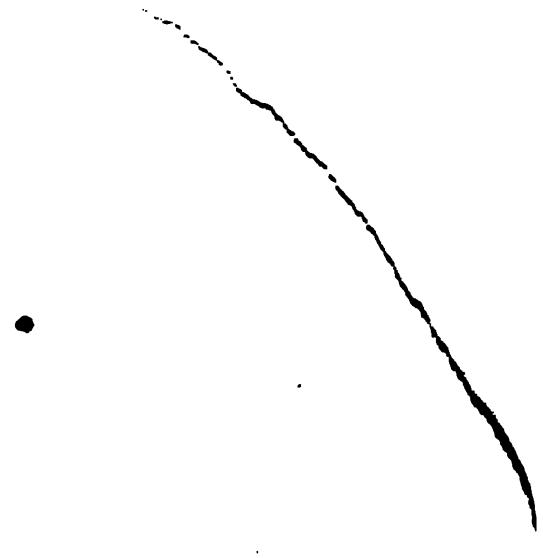
TRANSACTIONS OF THE THIRTY-FIRST ANNUAL MEETING:
Minutes, ... 257
Report of the Treasurer, ... 264
List of Members, 1881, ... 265
PRESIDENT'S ADDRESS:
Work for our Association, ... 267
IN MEMORIAM:
REV. J. D. Pierce, ... 273
Zelotes Truesdel, ... 276
T. C. Garner, ... 280
PAPERS AND DISCUSSIONS:
Need of Visible Illustration and Use of Apparatus, ... 282
Country School-Houses, ... 286
Ornamenting School Grounds, ... 306
Science in Primary Schools, ... 310
From County Institute to County Normal, ... 317
The Microscope in our Public Schools, ... 326

DEPARTMENT OF PUBLIC INSTRUCTION,
Lansing, December 30, 1882.

To His Excellency, DAVID H. JEROME,
Governor of the State of Michigan:

SIR,—In compliance with the provisions of law, I have the honor herewith to transmit through you to the Legislature, the annual report of the Superintendent of Public Instruction, together with the accompanying documents, for the year 1882.

Very respectfully,
Your obedient servant,
VARNUM B. COCHRAN,
Superintendent of Public Instruction.



ANNUAL REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION

FOR 1882.

ANNUAL REPORT.

In the general prosperity that has attended the people of Michigan during the year 1882 the cause of education has fully shared. While the sound condition and the aggressive enterprise of business, the steady advance of internal improvements, and the rapid building up of the new portions of the State by the immigration of the best classes of foreign population, are strengthening and extending the material interests of the people, it is gratifying to have certain evidence that due attention has been bestowed upon another interest of incalculable concern to society. The present age has been subjected to much adverse criticism for its alleged sordid tendencies. Such strictures have been drawn with especial rigor upon us Americans. We have been called a commercial people merely, and, as a community, are said to be in danger of suffering from an extinction of all the finer qualities of social life. Unquestionably there is in this broad and general statement an element of truth; for, although it is a healthful sign that railroads are building, if traffic demand them; that vast enterprises are being established; and that fine houses are being erected; yet, unless it can be shown that all this is accompanied by improvement of other sorts, there is some reason for contemplating it with uneasiness. If there is danger from the power of money, the chief counter-agent to its influence must be sought in other means of power. Riches must not monopolize our admiration. Learning, virtue, sobriety, all the finer and nobler elements of character, must be fostered and developed, having which a man can afford to ignore the baser enjoyments that money may buy for the senses. The highest state of society will be reached only when the greatest power of getting things shall coincide with the best knowledge of using them. It therefore becomes of the highest moment to the community to provide means whereby this higher development may be available by even the humblest citizen. To this end there is absolute necessity for a system of public instruction conducted on the most enlightened principles, which shall make straight and smooth to the steps of every child the pathway from the rudiments of education to the most comprehensive learning. No citizen of Michigan can be indifferent to the enviable reputation his State enjoys for the completeness of her school system and the advanced sentiment of her people; and it should be always a fundamental article of every policy that shall find expression in the management of her affairs, that not only shall this fair reputation be maintained but that successive years shall add to its lustre.

The growth of our population, especially since much of it is from foreign sources, continually adds to the area over which educational facilities must be

extended, and of course increases in a corresponding degree the expense of furnishing them. But our growth in wealth at the same time supplies the means for meeting the additional demand. We must not lose sight of the fact that liberality is a relative term; and it must be remembered that, if we continue as liberal toward our educational interests in the future as we have been in the past, the gross amount expended must bear a constant ratio to both our needs and our ability to supply them. A spirit of parsimony toward our school concerns is more to be avoided than even an unreasoning and lavish liberality. When once well instilled into the public sentiment it becomes a public enemy of immense possibilities of harm. From it is but one step to utter carelessness as to educational matters, and even enmity against education itself and its advocates. Let this final stage be reached in a republic and it is but one remove from a tyranny, for there could be no doubt as to the issue of a contest between the mass of ignorance on the one hand, and the concentration of wealth and selfishness on the other. These reflections are not called forth by any evidence of an inclination toward the evils mentioned, on the part of the people of our State. On the contrary, so hearty has been their support of a school system whose advantages to them they have been quick to perceive, that if any change in feeling can be noticed, it is toward a greater liberality. But so apt is an entire devotion to material concerns to breed a carelessness of other things, and as some observers of our national life have claimed to see signs of this among us, it has been thought well, as a sort of warning timely given, to emphasize the danger of such a tendency.

Comparative Statistics.

Table I exhibits a number of interesting items in the way of a comparison of the condition and progress of the schools in 1881 and 1882 respectively. In the latter year the whole number of school districts was 6,630, an increase for the year of 104; while 6,523 districts reported the maintenance of school, an increase of 242 over the preceding year. The rapid growth of the State in population is well exemplified by the large increase in the school census, the number of children between five and twenty years of age rising to 538,356, being by 20,062 larger than in 1881. At the same time the percentage of attendance at school, which might be expected to show some falling off remains about the same, being 71.5. In that part of the table which presents the facts in connection with the employment of teachers, it will be remarked that the number of men teachers employed is shown to have decreased from 4,024 to 3,887, while the number of women teachers has increased from 10,448 to 10,580. Thus there is a decrease of five in the aggregate force of teachers employed. The average monthly wages of men teachers rose from $36.98 in 1881 to $41.56 in 1882, and of women teachers from $25.78 to $27.44. The whole number of school houses reported in 1882 was 6,728, an increase of 153, furnishing 27,331 additional sittings. The estimated valuation of school property was $9,848,493, showing an increase for the year amounting to $463,792. The financial condition of the districts, as shown by the table, appears to be a healthy one. Additional accommodations, in the way of buildings and repairs, have been provided during the year at an expense of $567,283.80, being $156,637.62 more than was expended the year before for similar purposes; and yet there has been in the total indebtedness of the districts a reduction of $23,882.72.

Of the above total number of districts in 1882, 6,191 were ungraded and

439 graded, an increase of 76 in the former and of 28 in the latter; thus showing a larger relative increase in number in the graded districts than in the ungraded. Of the total school census 297,170 children were embraced in the ungraded districts, and 241,186 in the graded. Thus the proportionately large increase in the number of graded districts corresponds with the growth of the school population in them, for while there were in the ungraded school districts in 1882 only 5,739 more children than in 1881, in the graded districts the increase was 14,323, a fact that shows the towns and cities to have increased in population faster than the country. The attendance in ungraded schools increased from 219,700 to 224,250, a growth of 4,550; while the attendance in graded schools rose from 152,043 to 161,254, an increase of 9,211. Nevertheless the percentage of attendance in the graded school districts remains still below that in the ungraded. To the inference from this fact, however, there is some modification in that more than two hundred and fifty private and select schools, located of course chiefly in the towns and cities, furnish instruction to above twenty thousand children that do not appear on the rolls of the public schools, though they help make up the census of the graded districts. There is every reason to believe that the rural schools, while by no means up to what they ought to be, are still doing their work with a degree of efficiency not surpassed in any previous year, and that the greater growth of the school population of the cities and towns is not entirely owing to removals from country to town for the purpose of taking advantage of superior educational facilities, but mainly to the more rapid increase of the urban population from general causes. The disparity between the number of children in the graded districts and the number in attendance upon the schools, besides confirming the truth of the foregoing observation, serves to draw attention in an especial manner to the increasing importance of securing a more general use of school advantages by the masses of children in our cities and towns. The average monthly wages in the graded schools are, it will be observed, higher than in the ungraded, being, in the former, men $72.91 and women $33.36, and in the latter, men $30.91, women $23.32. An examination of the comparative statement will, however, show that this difference is less than for the year 1881, for though, as shown above, the average of wages over the State rose $4.58 per month for men and $1.66 for women, yet the increase is due entirely to the rural districts, where the differences respectively are $4.61 and $4.83, there being in the urban districts a contemporaneous decrease of $1.20 and $3.48 per month for men teachers and women teachers respectively.

The New School Law.

The revised and consolidated school law of 1881 became operative on the first of July of that year, and the examinations of the fall were held in pursuance of its provisions and under the charge of the instruments created by it. By the time of the issuance of the report of this department for 1881, not sufficient experience under the new law had been had to afford basis for any general estimate of its adaptability to the end for which it was enacted. Indeed it is still too early to venture upon such a criticism of the new system as shall seek to determine once for all the precise value of every part of it. Though opinions may be measurably in harmony upon some points, yet it must be constantly remembered that the whole was conceived and brought forth as a system; that its parts were constructed with a view to mutual action; and that infinite danger to the whole is involved in thoughtless and indiscrim-

inate condemnation of certain parts, so close is the inter-dependence between them. If it shall be granted, as probably none will deny, that the general effect of the law has been excellent, then surely it is but the just and wise thing to allow such features as may possibly not commend themselves to our unqualified approval, some little time to show unmistakably whether they may not eventually, not only work without conflict with others, but, as often happens, prove themselves the most acceptable of all. From all portions of the State come manifestations of the increasing favor with which the system is regarded. While in general it is true that public sentiment must go before the law, yet it is none the less true that there is an educating force in law itself. Frequently a statute of pronounced character meets with an opposition that its merits convert into the firmest support. Unquestionably the public verdict now is far more favorable toward the new law than it was a year ago, and its general reception has by no means disappointed the expectations of its friends. In evidence of the friendly feeling toward the law I will quote a few sentences from reports of secretaries of county boards of school examiners, selecting them so as to give expression to the sentiment of different parts of the State:

Geo. A. Parker, Secretary of the Sanilac County Board: "At the present writing we are highly gratified with the result, and feel encouraged with the outlook for another year. Many difficulties had to be met and overcome in making such a radical change; but we are assured that there is a general, almost universal, feeling through the county now that the change is one which will undoubtedly elevate the schools from the unenviable position which they have held for several years into one of comparative progress. We already feel the stimulus, and the intelligent public are commenting favorably upon the first effects."

James F. Zwemer, Ottawa Co.: "The present system is gaining the good will and the respect of the people as its work and its results become known. While there are minor points where amendments might be made with great advantage, the board echoes the voice of its constituency when it says, 'Give the present law a fair trial and it will soon be a school law loved and honored by all true friends of education.'"

Frank Millis, Lapeer Co.: "I have made it a point to talk with citizens from every township, and almost without exception they seem pleased with the new order of things."

C. C. Jencks, Kalkaska Co.: "The new system of supervision and examination, taken as a whole, is looked upon with general favor by teachers, school officers, and the people. * * * * All things considered, the results of the first year's trial of the new law in this county have been fully equal to our expectations and quite satisfactory. Like all new ideas its practical worth is to be tested only by experiment in its practical application; and added experience in the employment of the means is equivalent to increased excellence in the means itself."

W. S. Potter, Emmet Co.: "There is a pretty general admission that the new order of things is a decided improvement on the old."

Joseph Estabrook, Eaton Co.: "There is a general expression of satisfaction with the change in the school law."

W. B. Northup, Houghton Co.: "The working of the new law has been highly satisfactory in securing for our schools a better grade of teachers; the sentiment of our people is that the law be not repealed."

J. C. Lawrence, Berrien Co.: "The board has succeeded better than it expected, and we feel sure the people generally are satisfied."

C. J. Kneeland, Grand Traverse Co.: "I am very glad to inform you that under the 'new dispensation' we are progressing nicely. There were many objections to the new system at first, but the marked improvement in the character and qualification of our teachers is fast doing away with even the most serious objections urged against the new law. * * * * We are making better teachers under the new law than this county has ever had under any other system."

E. M. Stephenson, Cass Co.: "Although the new law has not yet wrought its best results, there are assurances of its final success. * * * The new law is thus acting as a stimulus, arousing to action forces hitherto latent; but notwithstanding these favorable indications there exists in some sections quite an antipathy toward it, and in at least two instances efforts have been made to petition for its repeal; but I am confident that all efforts in that direction will prove futile. I think that, with a fair trial, the new law will vindicate itself, and in time answer all objections raised against it."

James J. Decker, Bay Co.: "The system in this county gives the utmost satisfaction; and the general opinion, among teachers especially, is that the grade and standing of our schools have taken a grand step forward."

C. T. Grawn, Wayne Co.: "The new law is meeting with approval, and the result is that our schools are in a better condition than ever before."

The extracts, given above, voice the general sentiment so far as expressed. Of course the limits of our space will not admit the reproduction here of all that has been written on this subject by the members of county boards. Wherever any opposition has been experienced, as to some extent was the case in Cass county (see extract from Secretary Stephenson's report above), it has been most pronounced at first, when the law was least known and least understood, and it has rapidly grown fainter and fainter as the operation of the system tended more and more to demonstrate its capabilities of good.

These observations relate of course to the general feeling concerning the law as a whole, and do not mean to deny that different portions of it have come in for some share of adverse criticism. It is to be remarked, however, that what is questioned by persons in one locality is often as highly extolled by those in another, and this in itself is an additional reason why every portion of the entire scheme should be given time to bear its best fruits, to overcome the difficulties that met it at its inception, and to demonstrate what its power for good really is. The groundlessness of some objections has already been proved. Other features have been found to work with a greater degree of satisfaction than the first trial seemed to promise, and, in point of fact, many of those parts that have caused friction in some localities have been found to work smoother later on, when those charged with their administration had been able to profit by a more extended experience. It is safe to say, therefore, that any opposition which might ever have been developed against the change from the old order of things to the new, has either been wholly overcome or been transferred to some special feature which, in the estimation of the individual, could be improved.

Examinations under the new system were found to be more rigid than under the township plan. In some townships teachers had been at work for years without having to go through with even the semblance of an examination after the receipt of their first certificate, and that even had been granted after the most cursory inspection. In the case of failure of such a candidate he and his friends stood ready to charge it to a fault in the method of examination, or to claim it to be a result of too great requirements on the part of examiners, instead of placing

the responsibility where it belonged, in part upon the individual himself and in part upon the working of a system which would permit such a state of things. This lack of preparation for a suddenly increased severity of examination, being natural under the circumstances, was foreseen, and to a great extent was provided against by recommending a lenient policy at the first examinations. Besides this the examiners, as a rule, issued a greater number of special certificates to candidates at these examinations than it is the design of the law to encourage ordinarily; and thus, while admitting into the schools many whose qualifications would hardly justify their employment, the immediate demand for teachers was supplied from the best available material.

One other of the minor objections urged at the outset against the new law, is the one drawn from the inconvenience, in many cases, of attendance upon the examinations. Later on, however, this objection was deprived of the greater part of its force by the appointment in most counties of special examinations at such places as would best accommodate those teachers thus inconvenienced; and a continuance of this policy on the part of examiners is especially recommended.

We come now to the consideration of an objection raised, not by the teachers, but by those who hire them, viz.: The noticeable increase of teachers' wages under the operation of the new law. That there is ground for this in fact is evident from the showing of the tables hitherto mentioned, the wages of men having risen during the year an average of $4.61 per month, and of women $4.83 per month, in the rural districts, where of course the effect of the law is soonest and chiefly felt. The cause of this result is not far to seek. The methods of examination under the old system interposed, as a general thing, few obstacles between persons desirous of teaching and schools needing to be taught. It was possible for almost any one, whether particularly qualified or not, to obtain a license to teach. The inevitable result was to bring into competition with teachers of good standing and of devotion to their calling as a profession, a vast number of persons with whom teaching was only a makeshift, or a convenient means of escape from less pleasant work, and whose influence naturally depressed the wages of teachers to even a lower level than those of unskilled laborers. The first effect of the new system of examination was to sift out a great many of this latter class, and the result was that, by the action of the law of supply and demand, there was competition between employers instead of between those seeking employment, and the wages offered were a sure index of the fact. Thus, then, there is some cause for felicitation in this rise of wages, in so far as it indicates a superior quality of material employed. In the hiring of teachers the same enlightened principles must govern as in regulating any other of the business concerns of life. No man ought to pay more for an article or a service than it is worth. Nor is it a rule of any less force or worthy of less acceptation, that a poor article or a poor service is dearly bought at any price. The interests of teachers and community are in fact one, and wretched service for beggarly pay is discreditable to both alike.

Of course competition for employment must be restricted to persons capable of furnishing the requisite quality of service; but with this limitation alone the law of supply and demand should have free play, and here as elsewhere must work equitably to every interest concerned. Accordingly it must not by any means be inferred from the comparatively sudden and considerable rise of wages in the past year, that each succeeding year for an indefinite period is to show a similar increase. From this too hasty assumption has come much of

the apprehension expressed as to the working of the new law in respect to teachers' wages. The suddenness of the rise in wages was to some extent a necessary incident to the change in the system, owing in part to the fact that the very dread of an appearance before the tribunal of a county board deterred, as much testimony shows, a large number of teachers from attempting the examinations, to say nothing of such other features as have heretofore been adverted to. An artificial scarcity was produced which many natural causes are fast at work to remedy: such as the endeavors of unsuccessful applicants to fit themselves by hard study to pass future examinations; the preparation of large numbers of teachers in normal classes in the high schools and in colleges, incited to activity by the better inducements to teachers; the increased attendance at the Normal School; and the re-entrance of old teachers upon their profession whence the pressure of unworthy competition had driven them.

In view of all the facts I feel confident that the rise of wages has, under sudden and fictitious pressure, reached high water mark, and that instead of a continued advance we may rather look for a decline. This conclusion applies, of course, only to the average rate of wages. In some localities where the artificial impetus has been strongest and wages have risen unduly, more or less abatement may certainly be expected; while in others where the pressure, from various causes, has been little felt, there will doubtless be, if any change at all, a compensating rise. It is undoubtedly true that in almost every community the progressive classes, which are at the same time the truly conservative as well as the most numerous, are in favor of allowing to teachers fair and just compensation for their services, and that such will make no objection to this advance of wages provided only they are absolutely certain of getting value received for their money. In connection with this subject an extract or two from reports of Secretaries may not be out of place:

Edgar A. Fletcher, Kent County, says: "There seems to be an increasing demand by directors for competent teachers, which to us is good evidence of the growth and development of the educational work in the county. Fair salaries are paid, and many who have taught elsewhere are attracted to Kent county by the liberal salaries paid in our village schools. The same spirit exists largely in the district schools not remote from our villages. As a result, these schools are managed by competent teachers; the school buildings have been repaired and accessories provided; and new methods have been introduced, which instill new zeal and enthusiasm into both pupils and patrons. In nearly every place where good schools are maintained taxes are cheerfully paid, real estate has a higher value, and the people present a general appearance of prosperity."

Gilbert H. Blodgett, Mason Co.: "There is no question that the present mode of school supervision in the matter of examinations will secure teachers of higher qualifications and of greater efficiency, and I am satisfied that school boards are fast learning that qualified teachers in the true meaning of the term are always the cheaper, and that they stand ready to pay such teachers wages commensurate with the work they do."

The universal testimony of county examiners, of school officers, of patrons of the schools, which is confirmed by my own observation through the State, is emphatically to the effect that the *personnel* of the profession has markedly improved, and that a higher and more devoted purpose, a livelier and broader intelligence, are coming to characterize the teachers of Michigan. These things are attested by many significant facts, patent on every side: such as the earnestness with which teachers are everywhere devoting themselves to study in

order more successfully to meet the requirements of examiners; the great increase in the number of subscribers and readers of educational journals, and the vastly more frequent perusal of books on the theory and art of teaching, and the management and supervision of schools; the augmented attendance and the more active interest at teachers' institutes; the growing popularity and the more general establishment of county associations and township teachers' meetings; and the prevalent though subtle spirit that everybody knows and feels, which begets more frequent discussion of educational matters and lends increasing importance and interest to all topics connected therewith. The schools, particularly the rural schools, are already answering to the quickening impulse of this sentiment. No one can doubt that to-day a better quality of teaching and a keener zest of learning occupy the teacher's chair and the pupil's bench than for many a long day past. Accordingly a more intimate identification of the teacher with the interest and progress of his particular school is noticeable, and the result is that fewer changes in teachers than usual have been made during the past year, as shown by the fact that, though the whole number of teachers employed in the State during 1882 was five less than in 1881, school was maintained in 204 more districts. This result is of considerable importance and ought not to escape attention, for it marks an inroad upon one of the most besetting evils of our district schools. Few more serious obstacles exist to the proper arrangement and execution of systematic instruction in our rural schools, than this unreasonable and annoying perpetual succession of teachers. And this tendency to discourage the injurious habit of such changes is not the least advantage resulting from the superior qualifications demanded of teachers by the new method of examination.

Examination and Supervision.

A reference to Table XII will exhibit many items of interest touching the examination of teachers and the granting of certificates. Of the 8,474 certificates issued under provisions of law during the year, 174 were of the first grade, 638 of the second, and 7,662 of the third. Besides these, there were 3,106 special certificates issued by the secretaries of county boards. Special certificates are in the nature of permits to teach particular schools, and are granted to candidates whose schools are to begin before the public examinations occur, but who could not otherwise contract legally with school boards. In many cases, also, they have been issued, upon authorization by the board, to persons that had been unsuccessful at examinations held but whom it was found necessary to license in order that there might be teachers enough to supply the schools. Under the latter circumstances it has been the custom generally to license first in order those whose standing at the examinations was nearest to the percentage required for obtaining regular certificates. It is expected, as indeed it is contemplated by the law, that this latter cause for granting special certificates will eventually disappear, and that their use will be confined entirely to the cases first mentioned. When the present system of examination shall have been some little time in operation, the supply of teachers will be constantly adequate to the demand for them, and thus there will be no need for manufacturing them to order. Nevertheless, this provision of the law is a very wise and useful one, for it enables the examining authorities to meet satisfactorily what, without it, would be a very embarrassing exigency. The number of certificates issued in cities, whose school boards are by law authorized to examine and license their own teachers, does not appear in

the above enumeration, nor does the latter include the statistics from Muskegon county, no report having, up to this time, been received from that county.

To facilitate the making of reports, as provided by law, blanks embracing statistical items as to the work of the examiners and the condition of the schools, were sent out to the secretaries of county boards. With a single exception these blanks were filled out with as much completeness as possible and returned to this office. I accompanied these blanks with requests for supplementary manuscript reports, treating in a more discursive and less formal way the chief points of interest connected with the progress of the schools and the operation of the new school law. The responses to these requests were not so general as it was hoped would be the case, reports being received from somewhat less than half of the counties. While many of these supplementary reports received have been prepared with much care and ability, embracing items of general interest, yet the majority were evidently not intended for publication, since they mingle with the treatment of public questions so much that is of a more private or confidential nature as to make it impracticable to present them among the accompanying documents. The information furnished by this means, however, has been and is of great benefit to the Department which is thus put in possession of many valuable facts touching the local operation of different features of the system. Moreover, information furnished from such sources cannot fail materially to influence a policy which it is hoped will better subserve the important interests upon which the information has a bearing. While it is true, therefore, that a much smaller number of secretaries prepared and forwarded manuscript reports than was expected, there has been a still greater complaint on their part of the small number, and the fragmentary character, of the reports made to them by the chairmen of township boards of school inspectors. In fact the testimony of the majority of examiners is to the effect that comparatively little information of value, touching the condition of the schools or the work done by teachers, has reached them through the medium of the township chairmen. In many counties reports were received by them from only a part of these officers, and in these cases the items of interest were not given in full. This has led many members of county boards to conclude that the present system of visitation can not be made to work advantageously, and has called out the opinion that this visitation must be made by a member or members of the board itself, in order that the examiners may be in possession of those facts concerning the work of the teachers in the school-room whereby a better estimate of fitness may be made in the future certification of these teachers. In illustration I quote as follows:

A secretary in one of the eastern counties says: "I desire to call your attention to that provision of the law requiring the chairmen of the boards of school inspectors to visit schools. That part of the work has been almost a total failure in this county. From the fifteen townships I have been unable to get but eight reports, and of those received more than half are so imperfect and unintelligible that they are worthless. These reports have not aided the board of examiners. Scarcely one of them contains any comment as to character of the work done by teachers. * * * It has occurred to me that if the law could be so amended as to give the secretary of the board of examiners the power of visiting the schools, and to make his compensation sufficient so that he could devote his whole time to school work, much more could be accomplished by the board of examiners."

Charles D. West, Lenawee County: "It seems to me that the board that grants the certificates must in some way come into closer relationship

with the teachers in the actual work of the school room. I would suggest this plan, not an original one, probably, but one which I think would add greatly to the efficiency of our schools: Let the examining board remain as it is; divide the county into three districts and let each examiner have supervision of one of these districts with a salary sufficient to allow his whole time to be devoted to it."

Free Estee, Isabella County: "At a joint meeting of the chairmen of the township boards of school inspectors and the board of school examiners, this matter was thoroughly discussed, and the conclusion arrived at was, that one member of the board of examiners ought to visit every school in the county either alone or in conjunction with a township school inspector, at least twice each year."

Rev. John Redpath, Charlevoix County: "Some men are of the opinion that the two examiners should do the visiting, as the secretary has enough to do without visiting regularly."

Though the plans suggested in the above extracts differ more or less in particulars, yet they agree in the general view that the present visiting officers are not well qualified for their duties, and that even if they were, the results of their visitation, so far as relates to their bearing upon the certification of teachers, could not be intelligently available by the examiners, since it is essential that the same authority that grants a certificate and in granting it must have regard to the applicant's fitness as a practical teacher, must for itself attend to the inspection and supervision of the school. Unquestionably there is much force in this position. I am not satisfied, however, that the present plan is not substantially the best that we can at this time command, and I have no doubt it can be made to work with vastly more success than in many localities it has worked.

As to the plan for committing the work of supervision to three officers whose whole time should be given to it, no more need be said of it, despite any advantages it may possess, than that its great expense puts it, at least for years to come, far beyond the field of practicability. To the suggestion that the old office, essentially, of county superintendent be restored, by making the compensation of one member of the county board such as to enable him to devote himself entirely to inspection and supervision, there are many objections. In the first place it will generally be admitted that, even with such an officer, the local inspector could not profitably be dispensed with. In all of our larger counties the time that the county inspector could give to each school would necessarily be so brief that but comparatively little influence could come of it upon the methods and work of the teacher. Visitation should be so frequent as to enable the visitor to make recommendations as to every department of school work needing them, and also to ascertain, from time to time, in how far his suggestions have been complied with. Moreover, the success of any school much depends upon the local sentiment of the community around it, and this sentiment, as was said in my last annual report, the local inspector is, from the very nature of the case, especially well fitted to know, to represent, and to improve. If the right kind of a man he would, from a residence in the same town, better know the teachers and pupils, their needs, their discouragements, their plans, prospects, and possibilities, than an occasional visitor could; and from this more intimate acquaintance he would be the better prepared to give timely advice, helpful suggestions, and friendly criticism. If, then, the local supervision cannot advantageously be dispensed with, and the work of general supervision be thrown upon a single officer in

each county, we come again to the objection to be found in the expense of his employment. While, from the nature of the case, this objection may be lightly rated by examiners, it would be sure to possess considerable force with the people. It will be remembered that this was one among the objections before which the old county superintendency system went down. As an ideal system such a plan for combining the advantages of general and of local supervision is admirable; but in matters of public policy we are restricted to what only is practicable. When we can not get what we should like let us get the best we can, and then let us administer to the utmost of our ability what we get. Doubtless there will come a time when both the public temper and the public purse will be ready for a system like the one referred to.

In my report for 1881 I used this language: "I confidently look forward to the time when one member of the board in the larger counties may give his entire time and best efforts to general supervision, with fitting pay for the best kind of service. That time, however, has not yet arrived. But even then the local supervision by the chairmen of township boards would be a factor of prime importance." These sentiments are still mine. Notwithstanding that the work of the inspectors has in some localities been disappointing, I see no cause for altering the views then expressed. There exists, in the nature of things, no reason why the people may not choose the best men as inspectors; no reason why inspectors shall not devote themselves earnestly to their duties. In the claim that however careful the chairman may be in making his reported estimate of the condition of a school and the ability of the teacher, the examiners cannot intelligently use the information so furnished, there is little force; and so far as there is any, it can be urged also against the supervision by one examiner. Even if one member were to perform this duty, the board as a whole,—and it is the board which grants the certificate,—must rely upon the judgment of the member that visited. Why may not they all as safely rely upon the judgment of an intelligent and faithful chairman of school inspectors, chosen for his fitness for the place, who has carefully looked after the schools of his township?

But the difficulty, it will be claimed, is in securing such a man in each township. This, it is true, will not always be accomplished; but a decided improvement in this respect may confidently be expected from a dependence upon that public interest in educational matters which the experience of the last year shows to be so steadily growing.

In this connection I wish to suggest a slight change in the law which, in the opinion of others besides myself, would conduce to the more satisfactory working of the local supervision: Instead of having the office of chairman of township board of school inspectors devolve each year upon the inspector whose term of office soonest expires, let the board elect its own chairman. In the duties of chairman experience is particularly needful in order to the most satisfactory service. To say nothing of its advantage in the inspection of schools, it is especially profitable in the matter of furnishing to examiners information on a large number of points embraced in carefully prepared blanks which contain items needed by the examiners for the most intelligent and effective performance of their duties. That the making of reports is a somewhat particular matter, may be seen from the fact that returns made by the examiners themselves are frequently, as to many items, imperfect, incorrect, or wholly wanting. This proposed change would allow the retention in office of a good chairman whom a year's experience had especially fitted for continued and

improved service, and would open the way for the people to show, by re-election, their appreciation of a good officer.

I have uniformly discouraged tampering with the law. I believe that before any distinctive feature is disturbed a sufficient time should be given absolutely and finally to decide upon its merits. But I am persuaded that the method recommended for choosing this important officer (which was, indeed, included in the original draft of the revised school law, and which involves a change that is really but a small one) is shown by the year's experience to be advisable. It would go far, I believe, to obviate the principal objections to the work of the chairmen. I cannot too strongly urge that, with this slight modification, the present system of examination and supervision may be made to do most excellent work,—that it may, in short, be made as good as any that would be practicable at this time. What is needed is, that the people of each township shall select the right man for the right place, and that between examiners and chairmen there shall be a close and intelligent sympathy, correspondence, and coöperation. That it is entirely practicable to secure these ends is shown by the following extract from the very admirable report of Secretary Marble, of Calhoun county: "The efforts of the board of examiners to secure good results from the new law have been seconded by a hearty coöperation of the visiting inspectors of the townships. Contrary to all expectation, in most, if not all, cases the townships selected the right men for the right places; and if they failed in some cases, the men elected, seeing their unfitness, refused to qualify, thus leaving the township boards to fill the vacancies with more suitable persons. A more earnest corps of workers cannot be found in the interest of any business or profession. If the townships in the future will act as wisely as at the last election, in selecting school inspectors, the schools will continue to prosper more and more. The semi-annual reports of these inspectors have been, as they must continue to be, of the greatest importance to the board of examiners in estimating the real efficiency of teachers, as well as the condition and progress of the schools."

Relief of School Districts that Suffered in the Forest Fires.

Among the objects to which was directed the attention of the Legislature at its extra session in 1882, was one of which the following mention was made by Governor Jerome in his call summoning that body: "The condition of the people of the Huron Peninsula of this State, who were sufferers by the forest fires of the late autumn, demands the consideration of the Legislature. Many of their temporary needs were relieved by the personal generosity of citizens in this and other states, but further assistance has become an imperative necessity. Communities and individuals who have given the subject the closest thought and most industrious investigation, concur with the Executive in the belief that the law-making power should be at once invoked." It is well known with what readiness, and how wisely, the Legislature addressed itself to the duties thus suggested. A liberal appropriation was made for the purpose of furnishing the destitute people with food and clothing and assisting them to rebuild their homes and to procure seed for putting in their crops. It seemed to me that, in this provision for the temporal necessities of the sufferers of the burnt district, an interest scarcely less important, even though not so pressing, should not be neglected. Accordingly, in my annual report for 1881, after adverting to these more urgent needs, I used the following language:

"The wants and necessities of the schools must not be ignored. They should command the attention and the best efforts of every friend of humanity and progress. To this end I have gathered facts and statistics based partly on personal observation and partly on reports from reliable sources, which I trust may be of some service in securing to the schools that just recognition of their claim for aid which these important interests merit among the other needs of this stricken people. Fifty school-houses were burned, with fixtures, books, and apparatus, entailing a loss to the districts of over sixteen thousand dollars. In some cases the school officers themselves perished, and with them the moneys and records of the districts. With few exceptions these houses were not insured, and in one or two instances only can the insurance be recovered. Many of these districts were heavily bonded before the fires, others were in debt, and nearly all, paralyzed by the wide-spread devastation, will be unable to rebuild or to maintain schools without material aid. With the known interest everywhere felt in the welfare of the young, and with such facts before us, I can but feel that these interests may be safely committed to legislators and friends with almost positive assurance of helpful recognition."

The Legislature was very willing to afford the assistance needed, and the sum of $15,000 was granted as a fund for giving to the suffering districts the relief required. It is gratifying to know that this money has been wisely and carefully expended. By its assistance every one of the districts reported as having lost its school-house, or sustained serious loss to its school property, has been enabled to rebuild or to repair the damage done by the fire; and thus many schools, which otherwise would have been utterly unable to afford any instruction to the children in their localities for an uncertain time to come, have suffered comparatively a slight interruption to their usefulness. Under the provisions of the act appropriating this fund, 27 school-houses in Sanilac county have been paid $7,653.25; 15 in Huron county, $5,538.50; and 6 in Tuscola county, $1,353. Thus, forty-eight of the forty-nine districts reported have been paid $14,544.75, leaving a balance of $455.25 to be paid to the remaining district (No. 3 of Elmer township, Sanilac county), upon the completion of the building as required by law, which will be sometime in the spring. For full statistical particulars concerning the respective losses sustained and the amounts of aid furnished, reference is made to Table XI, which is taken from the report of the Fire Relief Commission, and which was kindly corrected, for my use, up to the present writing, by John Sterling, Esq., of Detroit, Secretary of the Commission.

The Primary School Funds.

The moneys derived from the sale of school lands, and from escheats to the State, constitute the Primary School Fund *proper*, and bear seven per cent interest. One-half the cash avails of the sale of swamp lands are also set apart as a school fund, bearing five per cent interest, and this is called the Primary School five per cent Fund. The income derived from each of these funds, together with the surplus of specific taxes remaining in the State treasury, after paying the interest on the several educational funds, and the interest and principal of the State debt, forms the Primary School Interest Fund, the entire amount of which, that may be on hand at the time, is apportioned to the school districts of the State about the first of May in each year.

The condition of these funds for the fiscal year ending September 30, 1882, is shown in the following statement:

Primary School Fund.

In the hands of the State	$2,924,325 17
Due from purchasers of lands	357,638 25
Total seven per cent fund	$3,281,963 42
Interest paid by the State	197,147 95
Interest paid by holders of lands	29,504 00
Total income	$226,651 95

Primary School Five per Cent Fund.

In the hands of the State	$337,996 54
Income	16,713 92
Total school funds	$3,619,959 96
Total income from both funds	243,365 87
Surplus of specific tax transferred	314,044 98
Total Primary School Interest Fund	$557,410 85

THE UNIVERSITY FUND.

This fund is derived from the sale of lands granted to the State by the General Government for the support of a university, and draws interest at seven per cent. The amount to the credit of this fund, September 30, 1882, together with the income derived from the same, is as follows:

In the hands of the State	$485,601 80
Due from purchasers of lands	57,715 86
Total fund	$543,317 66
Interest paid by the State	$33,836 39
Interest paid by holders of lands	4,521 04
Total income	$38,357 43

THE AGRICULTURAL COLLEGE FUND.

This fund, derived from the sale of lands granted by the State and by the General Government for the support of the College, draws seven per cent interest. The state of the fund at the close of the last fiscal year was as follows:

In the hands of the State	$224,868 15
Due from purchasers of lands	142,249 09
Total fund	$367,117 24
Interest paid by the State	$13,957 04
Interest paid by holders of lands	8,672 61
Total income	$22,629 65

The Normal School Fund.

This fund, bearing six per cent interest, is derived from the sale of salt spring lands granted by the State for the support of a normal school. The condition of this fund and its income at the close of the fiscal year was as follows:

In the hands of the State	$60,075 45
Due from purchasers of lands	9,050 59
Total fund	$69,126 04
Interest paid by the State	$3,564 92
Interest paid by holders of lands	757 50
Total income	$4,322 42

Libraries.

Tables VIII and IX give statements of the condition of the township and district libraries of the State. From them it will be seen that, while only 413 townships report the maintenance of libraries according to law, yet this shows an increase of 71 over the previous year. There are 397 townships whose boards have devoted the library moneys to general school purposes, under the proviso of section 11, chapter XI, act 164, laws of 1881, which permits "that from and after January 1, 1882, such money may be used for general school purposes in any township wherein the township board thereof shall so determine." Under a proviso of a preceding section, any township so using the library moneys is exempted from the forfeiture of its share in the subsequent apportionment only upon condition of reporting to the Superintendent of Public Instruction that the township board has resolved "that the public interests will be better served by using said money for general school purposes." There are 315 townships from which nothing at all has been heard in reference to the subject of township libraries.

The above exhibit of facts calls for some observations. It is by no means creditable, either to our regard for law or to our reputation for love of popular education and the diffusion of general culture, that, while both our Constitution and our statutes impose upon every township in the State the unconditional duty of maintaining a library, of our 1,125 townships only 413 should report having done so. Some misapprehension seems to be entertained in some localities in regard to this point. From the fact that, under certain circumstances, townships may use the library moneys for general school purposes, the impression seems to have been received that the maintenance of libraries is optional with the townships. Of course this impression is entirely wrong. The reason for allowing such occasional diversion of the library moneys, may doubtless be found in the fact that there may occasionally exist circumstances of financial embarrassment, or of urgent need for unusual outlay in some department of general school work, which would justify the temporary use of the library moneys for other purposes. But the libraries are supposed to be supported and fostered carefully at the same time. In a circular which I issued to the officers of township and district libraries, accompanying the list of books recommended for use in such libraries by the State Board of Education, I said upon this point: "While it is true that the township board may divert the library moneys to general school purposes for any one year by so determining, and

reporting to this office that such action has been taken, the obligation on the part of the township to establish and maintain a library is none the less imperative, and such an application of the funds in any year does not relieve the township from its duty in this direction." It should be also borne in mind that this provision for an emergency ought not to become of customary employment. In communities where there is too great an indifference to the duty and the advantage of keeping good libraries, there must be in this provision more or less of temptation to practice a mistaken economy. Upon this point there is need of more general enlightenment, and to the wide-awake and intelligent township school inspector there is here an opportunity for performing a beneficent public service. Considerable improvement, however, may be noted during the past year, and there is promise of better things in the gratifying fact that township libraries have increased their number by 71, while the volumes in them have grown from 82,071 to 84,957, an increase of 2,886.

The revised school law took away from districts having less than one hundred children in their school census the right to use the public moneys for the establishment and maintenance of libraries. It was thought that districts, generally, having a smaller school population than this would hardly be able to support libraries, and that more good would result from the addition of the books possessed by them to the township library, or their combination to form such a library, than could possibly be accomplished by the small and too often carelessly kept supplies scattered among many weak districts over a large extent of territory. Of the districts in the State having a school census of one hundred or more children, 260 report the maintenance of libraries during the year. Among these are included, of course, the districts of our cities. The total number of volumes in the two hundred and sixty libraries was 156,251, while 51,897 were still held by the small districts of less than the census required by law. The whole number of volumes in both township and district libraries in 1881 was 279,884, and in 1882, 293,005; showing an increase of 13,121 volumes for the year.

Teachers' Institutes.

The institutes of the year have been characterized by more than an ordinary interest. The instruction given in them has been earnest, and, in most cases, practical; while the zeal and enthusiasm on the part of teachers, as indicated by their regular attendance and their evident purpose to derive the greatest possible advantage from the sessions, are worthy of especial mention. The whole number held has been 68, an increase of 13 over 1881, while the aggregate attendance has been 5,566, an increase in the enrollment of more than 1,000 teachers. No previous year has witnessed either so large a series or so numerous an attendance. Notwithstanding the fact that many of the institutes were held in the new counties, where the teachers are few, accommodations limited, and facilities for travel poor, still the average attendance upon the institutes of this large series has been quite equal to that of the preceding year. When the average of the whole reaches 82 teachers, as was the case both this year and last, and when we consider the small number of teachers in many of the new counties, we must conclude that this important agency for the better preparation of teachers is meeting with such an appreciation as cannot but result in improved methods of instruction in our schools. In one county (Oakland) there was held a two-weeks session, during which a good part of each day was devoted to a drill upon the subject-matter of the branches commonly taught

in school. The institute was divided into sections, each of which was placed under an instructor in these branches, while the remaining time was given to the more specific work of instruction upon methods before the whole body of teachers. In some other counties an institute was held at the close of a teachers' class, conducted either by the county examiners or by some local instructor. Thus the work of the teachers' class in the reviewing of studies was supplemented by the work of the institute as to methods of teaching them. Thus while, as compared with previous years, the work of the institutes has been of a most encouraging character, I feel that there is yet opportunity for improvement in the various departments of institute activity. To this end doubtless much would be contributed by lengthening, wherever possible, the time of the sessions, and by uniting regular institute work with normal class drill. In accordance with this idea were made the experiments mentioned above, by which the several advantages peculiar to each kind of instruction were combined and made available to those attending the institutes in question. The results of the experiments afforded ample justification of them.

It should, as I believe, be always a principle of the policy controlling the teachers' institutes of the State, so to manage as to keep at home, and continually to re-inforce, the talent that now furnishes in Michigan a large number of the very best instructors in the whole country. It has been my good fortune to be able to command the services of these men during my administration, even when they have been subject to inducements to work on other States where the pay exceeds the remuneration received at home, and where a change of scenery, and the heartiness of appreciation, have been strong temptations. The number of these instructors that have done so much for the teachers of Michigan, and whose work has made them so well known abroad, that have been solicited to duty in sister States, is far greater than is generally known. In this connection I cannot forbear the pleasure, which is also a duty, of expressing to these instructors my sincere appreciation of their disinterestedness, as well as of the untiring courtesy that has lightened the responsibilities of my position in regard to the management of these institutes.

One important agency in securing a large attendance at the institutes, and in arousing an active interest both among teachers and in the community, has been the county boards of examiners. Thus to them is to be attributed very much of the success of the institutes in many localities. In great part the opportunity for developing and fostering an interest in the work of the institutes is furnished to these officers through the new method of examination, which brings them into intimate relations with the whole body of teachers in each of their respective counties.

For additional statistical items of interest bearing upon the institutes of the year, such as the number and grades of certificates held by those in attendance, the number in attendance without experience in teaching, the number enrolled having received instruction at the Normal School, the expenses of the sessions, etc., reference is made to the institute tables.

Meeting of County Examiners.

In connection with the meeting of the State Teachers' Association in 1881, there was held an informal conference of county examiners, to which a reference was made in the report for that year. On that occasion it was found that the time at the disposal of the examiners was too limited for the accomplishment of the desired objects. Accordingly, a full day was set apart this

year for such a meeting, at which time papers were presented and discussions held upon topics of especial interest to examiners in their work. Both papers and discussions were exceedingly able, and it was thought that their publication in the forthcoming annual report of this Department would do much good by giving them a wide circulation. A resolution was therefore introduced and carried, that copies of papers and abstracts of remarks be furnished the Superintendent of Public Instruction for that purpose. In pursuance of this resolution the papers read, together with one of the discussions, have been forwarded, and the same may be found in their appropriate place elsewhere in this report. This meeting was held in Representative Hall, December, 27, 1882, and was largely attended by examiners from every part of the State. They brought to the consideration of the different topics the benefit of an experience derived from the work in their particular localities; and, though a variety of views was presented upon almost every subject that came up, yet the sentiment seemed to be general that each man should labor to the best of his ability to secure the highest good attainable under the law as it is. Those who participated in this meeting doubtless took away with them much that cannot fail to be of use in the discharge of their duties. In conferring with their fellow officers from different parts of the State they were sure to receive hints and suggestions which would be helpful in meeting their own individual difficulties. The expedients that had been successfully adopted in one place would be remembered for use upon occasion in another, and thus what experience had gained for all became the possession of each.

State Teachers' Association.

The thirty-second annual meeting of the Michigan State Teachers' Association was held in Representative Hall, Lansing, from Wednesday evening, December 27, to Friday afternoon, December 29. A full record of the proceedings appears in another portion of this volume. The opening on Wednesday evening was a very pleasant affair, and was attended by a large number of teachers and school examiners from different parts of the State, and by a good many citizens interested in the schools and desirous of meeting some of their chief teachers. Several of the committee rooms, adjoining the House, were made headquarters for a variety of interesting exhibits of school work, including drawings, written class-work, and philosophical apparatus; those among the latter that attracted most attention being a number of ingenious illustrative mechanical appliances made by students at the State Normal School, and several fine microscopes with interesting specimens mounted for observation. There was also on exhibition a number of plans for school-houses, by architects Julius Hess of Detroit, William Appleyard of Lansing, and others. The sessions following were numerously attended, and were without exception accompanied with great interest and productive of much profit. The papers presented were upon live subjects, and as a whole were of unusual merit. They are all printed in the proceedings and it is unnecessary to particularize among them. I would, however, call attention to the illustrated papers presented by the architects, inasmuch as they are replete with information touching the subjects of ventilation, convenience of arrangement, cost of construction, and methods of lighting and warming school-houses; in which school officers, as well as teachers, are especially interested. The discussions were pretty generally participated in, and were real contributions to the consideration of the topics before the association. The interest

manifested by those in attendance, the zeal of the officers, and the character of persons chosen to offices for the ensuing year, bespeak a course of continued and increasing prosperity and usefulness for this organization.

State Institutions.

The University.

The history of this institution for the past year, has been one of gratifying progress and prosperity. As a whole, its affairs have moved smoothly and successfully. During the year President James B. Angell returned from the discharge of important and delicate diplomatic duties in China, entrusted to him by the President of the United States, wherein his conduct met with the cordial approbation of the Government, and reflected the greatest credit upon himself, his State, and the University. In the way of material improvement much has been done. The new building, for the accommodation of the museum, has been finished, and the transfer of the articles from the old quarters in the north wing of the main building, completed. The handsome and commodious structure for the library, which supplies a want long and sorely felt, and for which the Legislature of 1881 so wisely and so generously made provision, is nearing completion, and will, it is hoped, be ready ere many months to receive its precious store of books. I cannot forbear in this connection to suggest, that the erection of a suitable library building offers to public spirited citizens of means an opportunity for the philanthropic use of wealth, of which it would be a just cause of satisfaction and pride to take advantage. The library now owned by the University, carefully managed and wisely selected though it be, is yet far smaller and less complete than the wants of its eager and growing numbers of students and patrons demand, and than the fame and position of the institution would lead one to expect. Judicious bequests of books, or of money for the purchase of them, present the surest avenue for conferring upon the people most precious advantages which neither change nor time can lessen. Nor should the needs of the library ever be out of the remembrance of the Legislature. A moderate regular appropriation, or the setting aside of a permanent fund for the purpose, would make it always within the reach of the library to secure a constant addition of the best books, without which an institution of learning is ill-equipped indeed.

There have been very few changes in the faculties during the year. The number of students exceeded that in attendance upon any other institution in the land, being, by a curious coincidence, 1,534, precisely the same as in the previous year. This large number of students represents almost every state and territory in the Union, and several foreign countries; while the universal devotion to work, the growing scholarly and true university spirit, are causes for sincere congratulation.

The admirable report of President Angell, the report of the Regents, and the accompanying documents and schedules, will furnish a full review of the past year's work, and discussions of the needs and purposes of the future. The report of the Dean of the School of Political Science is of great interest in connection with the aims and methods of what must be regarded as a very important additional branch of study at the University; while that of the Finance Committee compendiously exhibits the financial status of the institution, the sources of income, the methods of accounts, and the expenditures. Many subjects adverted to by the President are of very great interest and importance.

Particular attention is called to what he says concerning the new "University System" of Sicily, and the need of higher educational qualifications by professional men. His presentation of some of the needs of the University, especially the want of increased facilities for the best work in the physical and biological sciences, is both forcible and modest, and I venture respectfully to call the attention of the Legislature very particularly to this point.

The Normal School.

The important work of preparing teachers for efficient service in the schools of the State has grown into greater prominence of late than ever before. The great interest and life manifested in the higher duties exacted of the teacher upon the part of those entrusted with the charge, and through them, upon the community, during the past year, and the general awakening of public sentiment to the progress that is demanded, create a demand for a higher order of talent for a knowledge of better methods of instruction, and for a more elaborate preparation for better teachers. To meet, in a large degree, the wants of the Normal School is the object of the appropriation which I ask. As will be seen by Table XIII, a list of the applicants for admission during the past year and the several normal schools, instructors, and the number of pupils in each, will be found. The graduates of the Normal School are found in all parts of the State, and their success in their profession is a subject of universal remark. In the report of the Secretary of the Board of Trustees, which is appended to this report, and in the Normal graduates' own words, is found a full account of the organization and work of the Normal School. Although having attained a high degree of success, and an established reputation, the commencement of the present year opens with a large increase in the number of students, and the Normal graduates are in demand. The examinations, both oral and written, at the close of the year, were of a very high character, and the exhibition of the pupils in the different departments of the school was highly satisfactory. The Normal School is doing a work which cannot be estimated in dollars and cents, and which is of the highest importance to the future welfare of the State. The Normal School building is in a very unsatisfactory condition, and is entirely inadequate to the wants of the school. The necessity for its enlargement is apparent to all who have visited it. The Board of Trustees, in their report, have called attention to the fact that the influence of the Normal School is not confined to the State, but that a number of students are received from other States, and that the demand for graduates from this school is constantly increasing.

Prof. Daniel Putnam, who had been at the head of the Normal School from its organization, resigned the position of Principal at the close of the last school year, and Prof. Daniel Putnam was appointed Principal, and Prof. Lewis M. Gould, Assistant. The appointments of Prof. Putnam and Prof. Gould were made in August, 1882, and were agreed to by the Board of Trustees, to take effect at the opening of the School for the ensuing school year. Meanwhile the State Board of Education had been instructed to institute inquiries with reference to a Principal. Mr. Putnam declined the position, and Mr. Wells, who, it was supposed, would be the choice of the State Board, declined the position. Mr. Gould is a graduate of the classical course of the State University, has always been very successful as a teacher, and as a principal of the Normal School has given entire satisfaction. He resigned his position to accept the Superintendency of the Public Schools of Oakland, California, to take effect at the close of the present school year.

The completion of the new training-school building, which was erected at a cost of twenty-five thousand dollars, and was ready for occupancy at the begin-

ning of the fall term, has given new vigor to this important part of normal school work. At that time the powers, duties, and responsibility of the Director of this department were materially enlarged, and Prof. Austin George was elected to this position, which had become vacant through the entrance of Prof. Putnam upon the exclusive discharge of the duties of Principal.

In addition to this, some other changes in the corps of instructors have been made. Miss Ency J. Colman succeeded Miss Bignell as critic-teacher in the practice-school, the latter having been transferred to the academic department, in which also Mrs. Lucy A. Osband and Miss Kimball have taken positions for the present school year. The recent improvements in the courses of study, the additions to the corps of teachers, the increased facilities for work, and the growth in the number of students,—all these are indices of the steady advancement of this institution.

The report of the Board of Education printed among the accompanying documents, will be found a complete and interesting statement of the affairs of the School.

The Agricultural College.

Any one who shall examine the report of the State Board of Agriculture, and especially the reports of the President an professors of the Agricultural College, cannot fail to be impressed with the evidences of an entire devotion to the best interests of that institution upon the part of all who are associated in the management of its affairs. To this spirit must be attributed very much of the marked success that has gained for the College so excellent a reputation in the land. The members of the Board upon whom rest the general oversight of its concerns are, and always have been, noted for the earnest personal interest they take in whatever relates to its prosperity. The professors are busy not only in the care of classes and in the conduct of experiments pertaining to class work, but also in scientific investigation, in contributions to scientific journals, in lecturing before farmers' institutes, and occasionally on the public platform,—all ways in which very much practical good is done, and by which the reputation of both school and professors is much enhanced and extended. The number of students in attendance during the year was 221, seven less than the number of the previous year, and the graduating class of 1882 numbered twenty-eight.

George H. Harrower, B. A., for two years instructor in history, literature, and political economy, has been elected to the full professorship of history and political economy, and some alterations have been made in the arrangement of courses looking to the relief of professors from giving instruction in subjects widely remote from their particular departments.

A course of lectures by a competent lecturer in veterinary science now forms a very useful feature of the curriculum. The completion of the new library and museum building, a handsome and commodious structure, has permitted the convenient disposition of the books and articles, and is a credit to the institution. And here I wish to call attention to the recommendation of President Abbot as to supplying the College with a librarian. His remarks upon the accumulated work already awaiting care, and on the need of such an officer in order that the scientific and other material that has heretofore come and will continue to come into the possession of the College, may be made of use to the students, are worthy of consideration.

For some time the question as to the establishment of a department of

mechanics has been receiving more or less attention. A committee appointed to consider the subject reports favorably, and estimates are submitted of the expense attending the erection and furnishing of a mechanical workshop, and other provisions for the department. The new work in mechanics would not be independent of that in agriculture but subsidiary thereto. The subject is an important one.

Considerable interest is felt at the College in the mooted revival, on a more extended and systematic scale than formerly, of instruction and exercise in military tactics; and correspondence is passing with the War Department of the General Government as to detailing an officer to give instruction in military affairs.

President Abbot's discussion of the College labor system and his remarks on the present arrangement of vacations, are worthy of careful perusal. The reports of the several departments of instruction reveal a thorough method of work and in general exhibit an intelligent systemization of courses and a healthy progress.

Institution for the Education of the Deaf and Dumb.

From the reports of the Trustees and the Principal, it will be seen that this institution is discharging its delicate duties and important functions with the same intelligent care, and with the same success, as formally. The lengthening of the course of instruction, complete, from eight years to ten, will allow more time for the thorough drill of the unfortunate pupils of the school, both in the rudiments of knowledge, and also, to a considerable extent, in the elements of a good education. The establishment of a carefully graded plan of study, giving ample time for thoroughness with progress, and the commitment of the educational work into the hands of a thoroughly competent and experienced gentleman, are assurances that, so far as circumstances will permit, full justice will be done to the children of the school. In order, however, to the easiest and most efficient prosecution of their studies, there is urgent need of certain mechanical and illustrative appliances. I hope the request of the Principal, to be furnished with these important aids for the best work, may be granted. Another matter, also, to which attention is called, is the inadequacy of the present accommodations for the care of the deaf and dumb pupils sent to the institution. Naturally their number is continually growing, and it seems to me that we should aim to keep our facilities abreast with the need for them. It must not be forgotten that the usefulness of this school is not confined to the range of academical instruction. Great attention is bestowed upon the mechanical arts. Surprising skill is developed upon the part of the children, and thus a great number are fitted to become self-supporting and useful citizens. For the statistics relating to the school, and for a full account of its work, reference is made to the reports above mentioned.

The School for the Blind.

This institution has experienced a year of great activity and of successful work. The pupils have increased from fifty-five to sixty-three, and the number would considerably grow were the accommodations of the school adequate to demands. A graded course of studies is pursued, and instruction is also given in broom-making, sewing, knitting, and similar handicraft. A good deal of attention is bestowed on music. The inclination of the blind in this

direction is well known. They learn music readily, and it becomes not only an agreeable accomplishment and a source of no small consolation to themselves, but very many find in teaching it a means of self support. I last year noticed a lack of sufficient library facilities, and of models and philosophical apparatus. I am glad to learn that, during the year past, much has been done toward meeting the want felt in both these respects. Much more, however, may yet profitably be done in the same direction.

It is to be hoped that, so fast as can consistently be done, additional provision shall be made for the care and instruction of the large number of these unfortunates in our State, who would gladly avail themselves of such advantages as this school affords. The management and superintendence seem to be of the wisest kind. Certainly the condition and progress of the school and pupils indicate such to be the case. The object to which everything tends is thus briefly and directly stated by the Superintendent: "Our aim is to furnish the pupils with a good common school education, and to give them instruction in such occupations as they are best able to pursue." The efforts of the school are deserving of every moral and substantial encouragement.

Reform School.

In all that pertains to real progress the past year has been an eventful one in the history of this institution. The large number of boys committed to its care the previous year had made the fact apparent that additional room must be provided. Besides this, the main part of the old building was found to be in an unsafe condition, and an appropriation was therefore asked of the Legislature, at its special session, to rebuild the condemned part of the old structure and to erect suitable cottages for the accommodation of the rapidly increasing number of boys. The good which this school accomplishes has always met with ready recognition, and particularly of late its excellent management and its success in the work for which it was established have, in a peculiar manner, commended its needs to the favorable consideration of the Legislature. An appropriation of seventy-five thousand dollars was therefore willingly made to meet these requirements, and the board of control entered at once upon the work of providing the necessary buildings. One double cottage with accommodations for 100 boys is nearly ready for occupancy, and a cottage for the superintendent is fast nearing completion. Additional steam heating apparatus has also been provided, and some needed repairs made, which render the buildings now in use far more comfortable than ever before. The work of rebuilding the old part of the main building will soon be undertaken, and when this is done, and another cottage is finished, the school will be well equipped to meet its growing demands.

During the past fiscal year 543 different boys have been cared for, giving an average in the institution of 336, while the number reported at the close of the fiscal year is largely in excess of this average. In the care of these boys the school is successfully accomplishing the very best results. Its excellent discipline, healthful diet, required manual labor, and good training in the school room, together with the kindly spirit that pervades its entire management, cannot fail to secure in most instances the results for which it was established.

Reform School for Girls.

It would be difficult to over-estimate the importance of the work done in this school. To reform habits that have become almost a second nature, to substitute noble aspirations for utter carelessness or positive disposition to evil, must surely demand the utmost care, and be productive of vast good to individuals and to society. The plans upon which the conduct of the school was to be based, which were discussed and agreed upon before the actual establishment of the institution, have been found to operate with most extraordinary success. Great good fortune, too, has been experienced in that perfect harmony has been joined with intelligent purpose on the part of the managing board, and that the Superintendent appears to be endowed with rare qualifications for the nice responsibilities of her position. The great aim is to surround the unfortunates with the solacing and encouraging atmosphere of home, and to develop in them, as the Superintendent says, "the home instinct." Reformation has thus its seat in the character; it becomes part of the spirit and is not merely a form. The pupils are made at home in four very pleasant cottages, and the home duties involved in the care of the house are in each cottage discharged by the girls themselves under the supervision of teachers. The beautiful chapel, where the simple and impressive religious services are held, is connected with school-rooms where a regular portion of each day is spent in school work. September 30, 1882, there were 83 girls under the care of the school, and this number is expected to grow rapidly. An increase in accommodations is asked for, in view of the prospective demand for them, and this request I think may be granted with the full assurance that whatever appropriation may be made will be wisely employed, and be a profitable investment. Another recommendation that is made I wish most strongly to endorse, viz.: that the same privileges of medical and surgical treatment in the hospitals of the University be, by law, granted to the pupils of this School as are now enjoyed by those of the School for Dependent Children.

This institution is somewhat of an experiment, but it promises to be in every way a most successful one. The character of its work appeals strongly to the humanity of all men, and for an interesting statement of its difficulties and methods, and of its successes, as well as for statistical facts and pertinent suggestions, I refer the reader to the reports of the Board of Trustees and the Superintendent.

The Public School for Dependent Children.

The reports of the Board of Control and the Superintendent are replete with interest, and will richly repay the most careful perusal. The fundamental design of this institution, and that which gives direction to its activities, is to provide suitable homes for dependent children, and to fit them for becoming inmates of such homes. The children with whom it is concerned have nearly all been deprived of the advantages of the home circle, many never having had a home at all, and others having been surrounded with vicious associations even in the homes they had, their little lives inevitably imbibing the taint of crime and disease.

At this school as many as possible of the features of home life are cultivated; the pupils are domesticated, as it were, in families in different cottages under the charge of kind and matronal superintendents. Instruction is carefully given in the ordinary branches of a good English education, and also in

some of the simpler and more useful trades. Care is taken, however, that neither study nor work shall become irksome, and provision is made for a good variety of, and all proper indulgence in, recreations, sports, and games. Many improvements have been made in the course of the year in some of the appointments and conveniences of the school, and attention is called to some few other matters in the direction of which some small expense may be incurred profitably and with true economy. Too much cannot be said in commendation of the work of this school. This is no place for enlarging upon it, but no citizen of Michigan can read the able and interesting reports referring thereto, without feeling his humanity quickened, or without a thrill of honest pride in the beneficent policy and patriotic charity of his State.

Education in Penal Institutions.

Within a recent period the authorities in charge have given considerable attention to furnishing instruction in the common branches of an English education to the inmates of our penal institutions. At each institution a competent teacher is employed. At Jackson, thirty of the prison officers, and at Ionia, thirteen inmate instructors, aid the superintendent of the school in the work of instruction. While this feature of prison life is comparatively a new one at both places, the effect of the work done is already apparent in its influence for good upon the prisoners themselves. The opportunity for self improvement which such schools offer tends so to interest those availing themselves of it, that the necessarily rigid discipline becomes less irksome, and an awakened hope of better things at the expiration of the sentence goes far toward securing such conduct on the part of the inmates as often leads to a shortening of the term of commitment. During this year 701 prisoners at Jackson, and 335 at Ionia, have taken advantage of the school privileges thus furnished, and the progress made in many instances has been truly surprising. The library of the State prison contains 2,442 volumes, and the one at the State house of correction and reformatory 1,198 volumes, of which latter 150 have been added during the year.

Incorporated Institutions.

The system of public instruction in Michigan is quite complete, and higher institutions of learning are sustained and built up by the provident bounty of the State. But room still remains for the activities of educational institutions not supported by the commonwealth. Private enterprise seeks here, as in other paths, remunerative employment, and becomes, in return for patronage sought, a means of enlightenment to communities. Departments of instruction into which it is not thought expedient to extend the instrumentalities of the State, receive attention at the hands of those especially interested in their propagation. These educational facilities are generally well abreast with the spirit of the times, and a large number of persons make use of them. They are accomplishing much good, not only in the furtherance of particular views, but in contributing to a general culture and to the growth of educational sentiment. The reports from these institutions have this year been not quite up to the usual standard of promptness and completeness, but an examination of those published herewith, and a reference to the tables (XXII and XXIII) will show that they have been generally prosperous and active during the year.

Conclusion.

Thus I have briefly reviewed the condition and progress of the educational agencies of the State during the year 1882. Despite some drawbacks the general aspect of the whole field is one to afford satisfaction and to give encouragement. The tide is beyond doubt setting in, full and strong, toward a career of increased popularity and prosperity for the schools. To have contributed in some small measure to this result, to have been associated in the working out, even of some little detail of this great whole, must be a source of sincere pleasure to any man. In common with all the noble teachers, and all the devoted school officers of the State, to whom I wish to make acknowledgement for most hearty coöperation and encouragement in the duties of my station, I must express my gratitude to the good people of Michigan for their generally staunch support of the schools, and return to the Great Dispenser of all blessings all praise for the unmistakable evidences of His continued favor.

In the office work of this Department the labors of the Deputy Superintendent, Mr. W. L. Smith, have been untiring and of great efficiency, and in this connection I wish to give renewed expression to my appreciation of his services.

In closing, I cannot forbear a brief mention of the names of some among the foremost laborers in the educational field, who, during the past year, have been called away from the scenes of life. First among them is that grand central figure of our school history, the first of my predecessors, whose worth and virtues two generations have known and admired, and the impress of whose character and work our educational system will bear forever. Father Pierce passed away full of years and of honors, having seen the fruition of the seed he planted long ago amidst difficulties but in hope. It was my intention to review somewhat at length his life and services, in a biographical sketch, but the admirable paper of Hon. Ira Mayhew, which will be found among the proceedings of the State Teachers' Association, has rendered it unnecessary for me to do so, and fuller justice has been done the treatment of this high theme than I could hope to do. In Prof. Truesdel the cause of education in Michigan lost a devoted friend, and one whose labors during many years of a busy life were productive of fruitful results. Prof. Garner, also, had been identified with the schools of the State for a very long period, and to them he gave his most earnest efforts during his best days. The papers of Superintendents Perry and Ewing are fitting records of the lives and deeds of both, and the reader is referred to them among the accompanying documents.

VARNUM B. COCHRAN,
Superintendent of Public Instruction.

STATISTICAL TABLES.

TABLE I.

Comparative Summary of Statistics for the Years 1881 and 1882.

Items.	1881.	1882.	Increase or Decrease.
GENERAL.			
Districts and Schools. (Table III.)			
Whole number of school districts	6,526	6,630	104
Whole number of districts that reported having maintained school during the year.	6,281	6,523	242
Average number of months that schools were maintained	7.7	7.4	*d* .3
Whole number of children between five and twenty years of age	518,294	538,356	20,062
Whole number of children attending public schools	371,743	385,504	13,761
Percentage of attendance	71.7	71.5	*d* .2
Employment of Teachers. (Table IV.)			
Number of men teachers employed	4,024	3,887	*d* 137
Number of women teachers employed	10,448	10,580	132
Whole number of teachers employed	14,472	14,467	*d* 5
Aggregate number of months taught by men	19,981.6	18,543.9	*d* 1,437.7
Aggregate number of months taught by women	49,883.1	51,875.9	1,992.8
Total aggregate number of months taught.	69,864.7	70,419.8	555.1
Total wages of men teachers	$738,936 64	$770,608 86	$31,672 22
Total wages of women teachers	$1,285,982 35	$1,423,294 07	$137,311 72
Total wages of teachers	$2,024,918 99	$2,193,902 93	$168,983 94
Average montly wages of men teachers	$36 98	$41 56	$4 58
Average monthly wages of women teachers	$25 78	$27 44	$1 66
School Houses. (Table III.)			
Number of frame school houses	5,052	5,207	155
Number of brick school houses	869	895	26
Number of log school houses	563	546	*d* 17
Number of stone school houses	91	80	*d* 11
Whole number of school houses	6,575	6,728	153
Whole number of sittings in school houses.	454,624	481,955	27,331
Estimated value of school property	$9,384,701 00	$9,848,493 00	$463,792 00
Financial. (Tables V and VI.)			
Amount of moneys brought over from preceding school year	$657,209 59	$876,882 28	$219,672 69
Amount received from the one-mill tax	507,148 53	514,504 56	7,356 03
Amount received from income of primary school fund	512,301 04	626,673 56	114,372 52
Amount received from tuition of non-residents	35,119 02	40,513 18	5,394 16
Amount received from district taxes	2,289,150 52	2,269,504 47	*d* 19,646 05
Amount received from all other sources	301,609 07	406,948 69	105,339 62
Total resources for the year	$4,302,537 77	$4,735,026 74	$432,488 97

TABLE I.—*Continued.*

Items.	1881.	1882.	Increase or Decrease.
Financial—Continued.			
Amount paid men teachers	$748,659 28	$767,004 32	$18,345 04
Amount paid women teachers	1,365,907 62	1,426,262 86	60,355 24
Amount paid for building and repairs	410,646 18	567,283 80	156,637 62
Amount paid on bonded indebtedness	297,984 09	353,017 61	55,033 52
Amount paid for all other purposes	595,036 08	675,722 34	80,686 26
Amount carried over to succeeding school year	884,304 52	945,735 81	61,431 29
Total expenditures for the year, including amount carried over	$4,302,537 77	$4,735,026 74	$432,488 97
Bonded indebtedness of the districts	$1,292,575 35	$1,246,119 06	d $46,456 29
Floating indebtedness of the districts	$94,718 49	$117,292 06	$22,573 57
Total indebtedness of the districts	$1,387,293 84	$1,363,411 12	d $23,882 72
Amount due the districts from all sources	$214,160 39	$228,483 36	$14,322 97
Miscellaneous. (Tables III and VII.)			
Number of townships and independent districts reporting	1,113	1,111	d 2
Amount paid and due inspectors for services	$17,372 78	$22,429 59	$5,056 81
Amount paid and due chairmen of township boards of school inspectors, as reported by inspectors	$22,232 45	$14,262 37	d $7,970 08
SPECIAL.			
Ungraded School Districts.			
Number of ungraded school districts	6,115	6,191	76
Number of children between five and twenty years of age	291,431	297,170	5,739
Number of children attending school	219,700	224,250	4,550
Percentage of attendance	75.4	75.4	
Average number of months schools were maintained	7.4	7.1	d .3
Number of men teachers employed	3,451	3,301	d 150
Number of women teachers employed	8,201	8,148	d 53
Whole number of teachers employed	11,652	11,449	d 203
Aggregate number of months taught by men	15,517.3	13,843	d 1,674.3
Aggregate number of months taught by women	30,067.9	30,616.3	548.4
Total aggregate of months taught	45,585.2	44 459.3	d 1,125.9
Total wages of men teachers	$408,127 45	$427,952 02	$19,824 57
Total wages of women teachers	$555,980 32	$714,117 70	$158,137 38
Total wages of teachers	$964,107 77	$1,142,069 72	$177,961 95
Average monthly wages of men teachers	$26 30	$30 91	$4 61
Average monthly wages of women teachers	$18 49	$23 32	$4 83
Total expenditures for the year	$1,554,653 78	$1,628,891 51	$74,237 73
Estimated value of school property	$3,491,787 22	$3,576,530 00	$84,742 78
Total indebtedness of the districts	$279,031 94	$294,299 29	$15,267 35
Graded School Districts. (Table XIV.)			
Number of graded school districts	411	439	28
Number of children between five and twenty years of age	226,863	241,186	14,323
Number of children attending school	152,043	161,254	9,211
Percentage of attendance	67	67	

TABLE I.—*Continued.*

Items.	1881.	1882.	Increase or Decrease.
Graded School Districts—Continued.			
Average number of months schools were maintained	9.5	9.3	*d* .2
Number of men teachers employed	573	586	13
Number of women teachers employed	2,247	2,432	185
Whole number of teachers employed	2,820	3,018	198
Aggregate number of months taught by men	4,464.3	4,700	235.7
Aggregate number of months taught by women	19,815.3	21,259.6	1,444.3
Total aggregate number of months taught	24,279.6	25,959.6	1,680
Total wages of men teachers	$330,809 19	$342,656 84	$11,847 65
Total wages of women teachers	$730,002 03	$709,176 37	*d* $20,825 66
Total wages of teachers	$1,060,811 22	$1,051,833 21	$8,978 01
Average monthly wages of men teachers	$74 11	$72 91	*d* $1 20
Average monthly wages of women teachers	$36 84	$33 36	*d* $3 48
Total expenditures for the year	$1,863,579 47	$2,160,399 42	$296,819 95
Estimated value of school property	$5,892,913 78	$6,271,963 00	$379,049 22
Total indebtedness of the districts	$1,108,261 90	$1,069,111 83	*d* $39,150 07
Teachers' Institutes. (Tables XX and XXI.)			
Number of State teachers' institutes held	55	68	13
Number of men enrolled at institutes	1,492	1,530	38
Number of women enrolled at institutes	3,056	4,036	980
Total enrollment at institutes	4,548	5,566	1,018
Received from county treasurers for support of institutes	$5,933 22	$6,745 57	$812 35
Received from State treasurer for support of institutes	$1,784 95	$1,800 00	$15 05
Total amount received and expended for support of institutes	$7,718 17	$8,545 57	$827 40
Private and Select Schools. (Table X.)			
Number of private and select schools	252	271	19
Estimated number of pupils attending such schools	19,788	20,577	789

TABLE II.

Apportionment of the Primary School Interest Fund for 1882, at $1.24 per Capita.

Counties.	Whole Number of Children in School Census.	Number Included in the Apportionment.	Amount Apportioned.
Alcona	919	889	$1,102 36
Allegan	12,397	12,380	15,351 30
Alpena	2,365	2,328	2,886 72
Antrim	1,974	1,858	2,303 92
Baraga	593	483	598 92
Barry	8,071	7,930	9,833 20
Bay	11,767	11,712	*a* 14,629 94
Benzie	1,102	1,102	1,366 48
Berrien	11,899	11,899	14,754 76
Branch	7,896	7,896	9,791 04
Calhoun	11,264	11,230	13,925 20
Cass	6,510	6,510	8,072 40
Charlevoix	1,999	1,929	*b* 2,416 34
Cheboygan	2,328	2,323	2,880 52
Chippewa	1,752	1,566	*c* 2,056 32
Clare	948	947	1,174 28
Clinton	8,615	8,615	*d* 10,751 50
Crawford	380	366	453 84
Delta	1,691	1,691	2,096 84
Eaton	9,250	9,215	11,426 60
Emmet	2,080	2,064	2,559 36
Genesee	11,785	11,785	14,613 40
Gladwin	321	321	398 04
Grand Traverse	2,583	2,526	3,132 24
Gratiot	7,379	7,312	*e* 9,135 78
Hillsdale	9,559	9,559	11,853 16
Houghton	7,596	7,283	9,030 92
Huron	7,176	7,156	8,873 44
Ingham	10,290	10,290	12,759 60
Ionia	10,057	10,044	12,454 56
Iosco	1,918	1,918	2,378 32
Isabella	4,083	4,058	5,031 92
Isle Royal			
Jackson	11,949	11,944	14,810 56
Kalamazoo	9,769	9,769	12,113 56
Kalkaska	1,053	1,046	1,297 04
Kent	23,688	23,654	*f* 29,373 73
Keweenaw	1,675	1,635	2,027 40
Lake	1,111	1,107	1,372 68
Lapeer	9,653	9,614	11,921 36
Leelanaw	2,222	2,222	2,755 28
Lenawee	14,325	14,266	17,689 84
Livingston	6,596	6,596	8,179 04
Mackinac	953	861	1,067 64
Macomb	10,812	10,812	13,406 88

TABLE II.—*Continued.*

Counties.	Whole Number of Children in School Census.	Number Included in the Apportionment.	Amount Apportioned.
Manistee	4,008	3,951	$4,899 24
Manitou	374	251	311 24
Marquette	7,465	7,357	9,122 68
Mason	2,805	2,805	3,478 20
Mecosta	4,597	4,476	5,550 24
Menominee	2,777	2,628	3,258 72
Midland	2,250	2,206	2,735 44
Missaukee	396	363	450 12
Monroe	11,691	11,644	*g* 14,484 14
Montcalm	9,726	9,652	11,968 48
Montmorency	64	23	28 52
Muskegon	9,159	9,073	11,250 52
Newaygo	4,712	4,566	5,661 84
Oakland	11,751	11,719	14,531 56
Oceana	3,613	3,613	4,480 12
Ogemaw	457	456	565 44
Ontonagon	1,079	1,079	1,337 96
Osceola	3,443	3,425	4,247 00
Oscoda	133	133	164 92
Otsego	618	618	766 32
Ottawa	11,977	11,977	*h* 15,004 12
Presque Isle	925	719	891 56
Roscommon	221	168	208 32
Saginaw	20,378	20,319	25,195 56
Saint Clair	16,056	16,540	20,509 60
Saint Joseph	8,144	8,144	10,098 56
Sanilac	9,901	9,901	12,277 24
Schoolcraft	292	292	362 08
Shiawassee	8,324	8,324	10,321 76
Tuscola	8,981	8,942	11,088 08
Van Buren	9,449	9,408	11,665 92
Washtenaw	12,737	12,699	15,746 76
Wayne	54,749	54,729	67,863 96
Wexford	1,994	1,963	2,434 12
Totals	518,294	514,874	$639,068 47

a Including $107.06, deficiency for 1881.
b Including $14 38, deficiency for 1881.
c Including $114.48, deficiency for 1881.
d Including $68.90, deficiency for 1881.
e Including $63.90, deficiency for 1881.
f Including $12 77, deficiency for 1880.
g Including $45.58, deficiency for 1881.
h Including $178.08, deficiency for 1881, and exclusive of $25.44, overpaid in 1881.

TABLE III.

General School Statistics, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	Number of townships and cities reporting.	Whole No. of School Districts.	Number of Districts that Maintained School during year.	Number of Graded Schools.	Whole No. of Children between five and twenty years of age.	Number of Children that attended school during the year.	Average number of months schools were maintained.	Number of School Houses and Material of Construction.				Number of pupils that can be seated.	Estimated value of School Property.
								Stone.	Brick.	Frame.	Log.		
Alcona	4	18	18	1	1,020	722	7.8	....	....	13	3	903	$16,210 00
Allegan	24	182	182	12	12,427	9,555	7.4	....	12	174	3	12,797	171,340 00
Alpena	6	9	9	3	2,605	1,735	7.1	....	1	27	3	1,936	38,600 00
Antrim	14	62	60	2	2,725	1,618	5.5	....	2	28	32	2,630	35,291 00
Baraga	4	8	8	1	661	430	7.	....	....	5	1	468	6,000 00
Barry	17	147	147	5	7,947	6,910	7.5	....	7	138	5	8,908	134,632 00
Bay	21	69	67	5	13,221	7,749	7.3	....	8	63	6	7,846	220,185 00
Benzie	11	33	30	1	1,221	866	6.1	....	....	23	6	1,304	13,825 00
Berrien	21	149	149	12	12,085	9,469	7.3	....	33	123	....	12,878	284,190 00
Branch	17	130	130	7	7,871	6,775	7.5	12	33	89	....	8,910	217,485 00
Calhoun	22	136	166	8	11,528	8,795	7.7	7	30	136	....	12,040	429,830 00
Cass	16	118	118	6	6,451	5,565	7.7	....	26	93	....	13,364	137,350 00
Charlevoix	15	61	59	1	2,301	1,570	6.2	....	....	34	23	2,507	25,495 00
Cheboygan	11	40	37	3	2,758	1,494	3.5	....	1	14	20	2,724	22,555 00
Chippewa	4	19	18	1	1,885	1,008	6.2	....	1	7	9	1,255	23,733 00
Clare	8	31	28	3	1,191	943	5.5	....	....	19	9	1,632	21,697 00
Clinton	16	130	130	8	8,615	6,856	7.5	....	14	116	1	8,138	118,520 00
Crawford	8	27	22	....	445	358	5.2	....	....	17	5	704	9,022 00
Delta	11	21	21	1	1,798	1,206	5.9	....	....	14	5	1,303	21,290 00
Eaton	18	147	147	8	9,153	8,083	7.4	1	23	125	4	9,868	160,905 00
Emmet	11	51	47	2	2,375	1,506	5.2	....	....	25	20	2,195	25,450 00
Genesee	19	161	160	12	11,791	9,860	7.6	....	13	147	....	12,181	235,385 00
Gladwin	4	16	15	....	366	291	6.3	....	....	3	10	403	4,137 00
G'd Traverse	11	57	56	1	2,998	2,322	6.3	....	1	44	13	2,998	35,072 00
Gratiot	17	119	119	6	7,751	6,300	6.9	....	4	109	5	7,478	91,025 00
Hillsdale	19	170	170	13	9,422	8,088	7.8	9	49	116	1	11,147	221,480 00
Houghton	7	19	16	10	7,908	5,102	9.7	2	1	13	1	5,132	128,200 00
Huron	27	91	89	8	7,859	4,652	6.1	....	1	64	23	6,058	59,384 00
Ingham	14	135	135	9	10,252	8,181	7.8	....	25	115	1	10,073	235,285 00
Ionia	17	145	145	10	9,973	8,452	7.6	1	22	126	2	10,795	168,595 00
Iosco	10	23	21	4	2,141	1,323	6.2	....	....	19	3	1,586	21,310 00
Isabella	16	39	32	2	4,431	3,234	7.1	....	3	57	21	4,509	57,753 00
Isle Royal	----	----	----	----	----	----	----	----	----	----	----	----	----
Jackson	20	160	159	10	12,453	9,744	7.9	2	55	113	....	12,384	300,390 00
Kalamazoo	16	140	140	8	9,942	7,851	7.6	....	27	117	1	10,117	258,618 00
Kalkaska	11	46	46	1	1,240	1,033	5.9	....	....	33	10	1,546	17,509 00
Kent	25	211	210	15	24,400	16,614	7.6	....	37	182	4	19,421	650,549 00
Keweenaw	7	12	12	5	1,768	1,211	7.7	....	....	13	1	1,438	20,500 00
Lake	13	46	45	2	1,389	1,001	5.9	....	....	34	11	1,997	26,880 00
Lapeer	19	134	134	10	9,545	7,828	7.8	1	3	128	2	9,380	124,055 00
Leelanaw	10	50	50	2	2,300	1,605	5.7	1	1	27	21	2,344	19,040 00
Lenawee	24	199	198	15	14,436	11,146	7.6	8	92	111	1	14,593	363,430 00
Livingston	16	133	133	5	6,514	5,613	7.9	4	12	117	1	7,678	106,362 00
Mackinac	8	21	20	2	1,216	816	4.6	....	....	14	3	1,135	15,830 00
Macomb	14	115	115	10	10,703	6,798	7.7	1	15	103	....	8,530	157,410 00
Manistee	13	47	46	2	4,872	2,911	6.	....	2	34	8	3,067	74,425 00
Manitou	3	5	5	....	368	249	6.1	....	....	2	3	320	1,100 00
Marquette	15	32	29	10	8,647	5,912	7.7	2	2	24	9	4,652	160,138 00
Mason	13	45	45	2	3,088	2,402	6.8	....	1	34	11	2,678	42,685 00
Mecosta	17	85	83	3	5,005	3,760	6.6	....	1	68	16	5,008	85,294 00
Menominee	9	25	24	2	3,525	2,151	7.4	....	1	23	4	2,437	52,495 00
Midland	15	52	51	2	2,391	1,747	6.1	....	2	33	16	2,731	43,380 00
Missaukee	11	34	34	....	505	381	6.	....	....	21	11	1,147	12,667 00
Monroe	16	137	137	6	11,724	7,497	7.7	2	64	72	3	9,732	124,756 00
Montcalm	22	129	128	11	10,009	7,973	7.6	....	3	118	6	9,508	143,725 00

TABLE III.—*Continued.*

Counties.	Number of townships and cities reporting.	Whole No. of School Districts.	Number of Districts that Maintained School during year.	Number of Graded Schools.	Whole No. of Children between five and twenty years of age.	Number of Children that attended school during the year.	Average number of months schools were maintained.	Number of School Houses and Material of Construction.				Number of pupils that can be seated.	Estimated value of School Property.
								Stone.	Brick.	Frame.	Log.		
Montmorency	3	10	7	----	107	69	4.8	----	----	2	4	202	$1,825 00
Muskegon	18	84	84	6	9,801	6,282	6.7	----	6	71	9	6,528	165,248 00
Newaygo	20	93	92	4	4,843	3,713	6.9	----	2	73	19	5,267	61,380 00
Oakland	25	216	216	16	11,652	10,108	7.7	15	30	178	----	14,281	277,060 00
Oceana	16	84	83	4	3,978	3,073	6.7	----	----	71	14	4,580	50,012 00
Ogemaw	11	30	25	----	648	447	5.5	----	----	13	9	913	7,947 00
Ontonagon	----	10	10	6	1,119	823	9.4	----	----	10	2	1,300	11,135 00
Osceola	16	76	74	3	3,790	2,716	6.3	----	----	45	24	3,464	40,193 00
Oscoda	3	11	10	----	182	126	4.6	----	----	2	4	214	825 00
Otsego	8	34	32	1	816	572	4.7	----	----	25	2	1,045	12,216 00
Ottawa	17	117	117	16	12,466	9,256	8.	1	13	107	1	10,502	181,400 00
Presque Isle	8	20	17	1	1,630	543	4 7	----	----	11	7	1,004	12,418 00
Roscommon	4	9	9	1	289	196	4.6	----	----	4	5	429	5,675 00
Saginaw	30	140	136	9	20,765	12,349	7.9	----	20	124	7	13,202	411,395 00
St. Clair	25	151	151	10	16,582	11,042	7.9	----	12	137	7	13,227	226,755 00
St. Joseph	16	125	125	9	8,073	6,796	8 1	3	29	92	----	9,422	239,755 00
Sanilac	26	124	120	11	10,363	7,284	6.8	----	3	97	16	7,899	73,187 00
Schoolcraft	----	9	8	1	452	304	6.9	----	1	2	6	658	12,816 00
Shiawassee	18	122	122	8	8,469	6,993	7 6	----	9	112	5	8,787	160,671 00
Tuscola	23	133	129	7	9,348	7,252	7.3	----	7	117	9	8,855	91,210 00
Van Buren	18	155	155	14	9,478	7,865	7.3	----	14	141	----	10,886	176,190 00
Washtenaw	22	166	166	7	12,804	9,818	7.9	8	55	107	4	11,847	374,290 00
Wayne	20	149	146	15	58,193	28,832	8.4	----	66	107	1	26,515	1,030,286 00
Wexford	17	62	62	2	2,393	1,712	5.5	----	----	42	14	2,645	32,097 00
Totals	1,111	6,630	6,523	439	538,356	385,504	7.4	80	895	5,207	547	481,955	$9,848,493 00

TABLE IV.

Employment of Teachers, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	No. of Teachers Employed.		No. of Teachers Counted Twice.		Aggregate No. of Months Taught by all the Teachers.		Total Wages of Teachers for the Year.		Average Wages of Teachers per Month.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Alcona	6	15	1	------	49	118.5	$2,466 00	$4,314 00	$50 04	$36 40
Allegan	92	318	12	82	402	1,299.6	14,442 65	29,102 34	35 92	22 39
Alpena	9	34	------	3	56	249	2,955 00	10,052 00	52 76	43 63
Antrim	13	72	------	23	73.3	312.7	2,689 75	8,249 33	35 76	26 38
Baraga	2	9	------	1	16	65.3	1,028 00	2,805 40	64 25	44 49
Barry	96	229	11	47	386.7	867	12,155 40	15,935 97	31 43	18 45
Bay	34	34	2	16	203.9	1,022	10,759 70	32,875 15	52 77	32 07
Benzie	12	39	1	4	48	176 5	1,753 00	4,285 48	36 52	24 28
Berrien	93	261	6	49	449 8	1,145.1	20,100 65	30,685 95	44 67	26 79
Branch	91	228	10	52	388 8	966.9	14,548 94	21,929 57	37 42	22 67
Calhoun	97	330	10	54	419.5	1,557	17,461 87	37,420 70	41 62	24 03
Cass	74	185	6	36	355 4	764.5	13,319 35	17,548 70	37 47	23 46
Charlevoix	35	64	6	11	131	254	3,749 00	5,878 40	28 61	23 14
Cheboygan	22	36	5	6	107.3	139.6	5,127 00	3,580 98	47 78	25 64
Chippewa	7	21	------	4	34.3	109.2	1,519 10	2,568 25	44 28	23 52
Clare	7	35	1	5	39 4	159.9	1,491 65	4,257 75	37 86	26 00
Clinton	84	204	13	53	372.1	861.3	12,924 99	21,198 60	34 73	24 61
Crawford	10	23	1	2	39.5	74.9	975 00	1,702 93	24 70	22 74

TABLE IV.—*Continued.*

Counties.	No. of Teachers Employed.		No. of Teachers Counted Twice.		Aggregate No. of Months Taught by all the Teachers.		Total Wages of Teachers for the Year.		Average Wages of Teachers per Month.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
Delta	8	33	1	6	45.6	169.8	$2,640 25	$5,877 75	$57 91	$34 67
Eaton	105	265	13	58	381	1,057.1	12,504 32	25,679 96	32 82	24 29
Emmet	19	63	3	13	84.5	270.9	2,815 20	5,197 54	33 31	11 80
Genesee	108	273	16	52	484.7	1,336.1	18,767 08	33,655 43	38 71	25 19
Gladwin	5	17	1	6	19.3	74 7	605 40	1,888 00	31 37	25 00
G'd Traverse	29	74	6	13	123	318	5,199 00	8,810 70	43 81	27 70
Gratiot	93	157	15	34	372 7	613 5	12,944 65	14,671 57	34 73	23 91
Hillsdale	126	281	12	63	524.1	1,099.8	17,581 78	21,879 52	33 64	19 88
Houghton	21	71	1	5	175	606.8	15,680 00	27,601 25	89 60	45 48
Huron	39	84	11	32	224.3	415.1	8,805 05	10,625 70	39 27	25 59
Ingham	93	271	13	53	377.3	1,198.5	15,194 30	27,893 69	40 27	23 36
Ionia	104	248	13	52	453.2	997.2	17,655 14	24,438 16	38 90	24 50
Iosco	10	31	3	6	77	158 2	5,517 80	4,824 00	71 66	30 49
Isabella	39	111	5	33	203.5	432.5	6,767 56	10,935 95	33 25	25 20
Isle Royal	------	------	------	------	----------	----------	----------	----------	-------	-------
Jackson	98	332	10	73	460 3	1,576.3	21,829 84	41,097 06	47 42	26 07
Kalamazoo	95	226	------	------	396.6	1,289.3	15,489 72	37,600 95	39 05	29 17
Kalkaska	19	62	7	22	73	222.2	1,934 50	5,065 50	26 50	22 79
Kent	138	444	30	76	698.7	2,448 7	33,395 87	77,855 96	47 71	31 71
Keweenaw	7	13	------	1	67	102	5,231 00	4,805 00	78 07	47 10
Lake	11	62	------	18	47.5	197.6	1,715 50	5,925 15	36 11	29 48
Lapeer	80	200	12	52	412.8	932.5	15,883 97	23,170 14	38 48	24 84
Leelanaw	26	48	8	11	123	184	4,078 41	4,585 00	33 15	24 92
Lenawee	122	397	19	70	528.2	1,776.8	22,467 68	32,671 98	42 57	18 39
Livingston	97	198	9	41	437.5	805.5	14,065 50	14,516 04	32 15	18 02
Mackinac	9	14	------	2	52.3	51.6	2,490 10	1,526 33	47 99	29 59
Macomb	72	155	7	36	374.6	820.1	15,796 30	19,318 70	42 18	23 56
Manistee	22	71	2	11	98.8	369.8	4,768 50	13,434 87	48 27	36 35
Manitou	4	6	------	------	13	18	450 00	445 00	34 61	25 00
Marquette	16	78	------	5	132.5	619.3	13,040 00	26,462 75	98 40	42 73
Mason	19	66	------	------	93.1	345.9	3,735 00	10,756 30	40 11	34 07
Mecosta	40	116	4	15	203.4	533.2	6,935 03	15,377 44	34 09	28 84
Menominee	6	39	13	30	53.8	275.3	3,292 00	10,937 25	61 12	39 73
Midland	13	71	1	1	63.8	307.9	2,694 75	8,727 76	42 23	33 58
Missaukee	18	31	4	19	80.4	97.9	2,585 95	2,465 75	32 16	25 19
Monroe	84	203	2	6	370.7	836.4	13,083 85	17,781 61	35 29	21 26
Montcalm	64	234	7	34	328.1	1,044.7	13,740 74	28,262 70	41 88	27 05
Montmorency	3	7	10	52	8	25.8	223 00	559 50	27 89	21 62
Muskegon	88	157	1	------	203.7	903.3	10,540 40	29,779 76	51 74	32 97
Newaygo	31	154	8	26	140.4	565.7	6,218 00	14,355 83	44 28	25 38
Oakland	145	310	8	50	673.2	1,498.4	24,089 21	31,411 20	35 78	20 97
Oceana	46	117	17	56	189	449.4	6,853 00	11,331 62	36 25	25 21
Ogemaw	6	23	9	23	23.7	105 8	757 25	2,898 05	31 95	27 39
Ontonagon	8	13	1	1	65	122.7	4,652 50	4,017 00	71 58	32 73
Osceola	43	92	1	------	193.4	285.9	7,240 00	10,455 65	37 43	36 57
Oscoda	2	12	6	28	6	37.5	175 00	750 50	29 16	20 02
Otsego	14	23	2	4	61.6	101.2	2,058 98	2,491 39	33 42	24 61
Ottawa	83	175	7	6	476.2	961.1	19,277 50	24,412 90	40 49	25 23
Presque Isle	13	6	10	35	56	25	1,753 75	644 00	31 14	25 76
Roscommon	2	13	1	1	9	41	384 00	1,236 00	42 66	30 14
Saginaw	83	249	------	3	469 9	1,657.2	25,388 25	54,202 43	54 03	32 11
St. Clair	76	224	8	46	412.7	1,310.5	15,575 30	31,846 70	37 74	24 31
St. Joseph	82	215	3	37	424.7	993.9	17,586 60	23,908 80	41 36	24 05
Sanilac	61	113	18	51	347.7	589	11,823 30	12,586 95	34 13	21 37
Schoolcraft	1	11	14	24	4	64.7	120 00	2,857 00	30 00	44 16
Shiawassee	99	190	10	43	402 8	896.4	14,308 95	19,235 72	35 52	23 30
Tuscola	89	148	17	33	445.4	671.8	15,519 33	16,156 59	34 85	24 05
Van Buren	92	247	8	45	428.5	1,089.1	16,399 42	24,187 80	38 27	22 20
Washtenaw	103	308	7	34	550.2	1,600.6	28,524 25	40,990 63	51 84	25 61
Wayne	97	480	4	36	631.5	3,794.1	36,950 58	176,074 68	58 51	46 41
Wexford	26	69	7	15	96.5	306.8	3,387 50	8,413 41	35 10	27 40
Totals	3,887	10,580	500	2,046	18,543.9	51,875.9	$770,608 86	$1,423,294 07	$41 55	$27 43

TABLE V.

Resources of School Districts, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	Moneys on hand Sept. 5, 1881.	One-Mill Tax.	Primary School Interest Fund.	Library Moneys.	District Taxes for all Purposes.	Raised from all other Sources.	Total Resources for the Year.
Alcona	$2,721 49	$2,155 87	$1,130 83	$0 91	$6,693 88	$1,695 17	$14,397 65
Allegan	16,567 62	9,576 07	15,417 57	401 14	34,984 98	3,561 75	81,495 66
Alpena	504 58	657 45	2,796 10	100 02	21,809 43	701 60	26,569 18
Antrim	5,364 73	1,740 31	2,041 73	16	12,607 10	1,628 79	23,398 05
Baraga	2,205 96	639 96	598 92	----------	4,660 00	47 12	8,151 96
Barry	14,456 18	8,776 41	9,071 10	637 32	29,463 51	9,402 11	72,443 23
Bay	17,894 86	4,151 38	20,510 68	348 59	75,539 32	3,217 44	121,846 64
Benzie	1,561 02	853 53	1,248 91	----------	7,544 85	829 24	12,086 56
Berrien	21,513 32	11,783 81	14,064 96	498 86	55,567 20	6,418 93	110,895 17
Branch	15,659 74	10,878 24	9,527 74	142 23	31,032 48	3,976 22	73,036 16
Calhoun	19,444 30	14,499 09	14,086 72	545 44	63,605 71	2,214 61	116,439 84
Cass	13,495 29	13,024 62	7,642 81	417 40	23,158 52	5,425 99	63,663 34
Charlevoix	3,894 67	1,324 14	2,246 47	----------	9,703 66	2,413 63	19,617 21
Cheboygan	2,740 92	2,633 31	2,364 65	81 03	9,514 53	2,391 71	19,759 65
Chippewa	534 24	517 75	1,963 52	----------	4,068 86	854 92	7,839 29
Clare	3,294 73	1,981 87	917 15	----------	8,425 56	2,053 64	16,672 95
Clinton	16,972 30	15,181 56	10,619 70	197 01	21,222 06	2,000 64	66,936 90
Crawford	1,208 61	790 69	271 99	----------	4,900 68	667 10	7,840 76
Delta	2,310 03	867 69	1,445 06	----------	10,556 98	145 72	15,331 98
Eaton	14,671 06	12,625 91	10,963 23	444 93	28,962 77	2,530 20	70,986 25
Emmet	3,343 20	881 65	2,195 72	16 53	11,010 04	4,308 27	21,290 16
Genesee	24,382 26	17,911 85	13,833 60	1,172 31	43,104 92	1,344 42	101,173 84
Gladwin	390 29	1,001 98	822 70	----------	4,409 00	2,497 79	8,621 76
G'd Traverse	4,131 34	1,978 40	2,739 49	11 60	15,289 88	1,821 84	26,103 38
Gratiot	9,628 78	5,421 99	8,911 24	66 78	21,388 12	6,576 21	55,438 22
Hillsdale	15,717 99	17,397 11	11,714 18	502 20	26,833 01	2,066 09	75,188 14
Houghton	21,249 02	5,671 68	10,469 43	229 42	53,172 29	5,447 49	96,239 33
Huron	5,456 23	4,009 79	9,391 71	103 76	18,641 77	9,643 84	47,289 82
Ingham	15,592 44	12,946 91	11,975 70	415 54	38,953 86	4,246 28	84,894 84
Ionia	20,679 40	14,388 12	11,942 46	395 58	35,422 05	14,936 69	98,590 71
Iosco	3,404 84	1,053 42	2,125 23	1 34	13,868 72	5,587 65	26,048 20
Isabella	9,051 53	3,198 07	4,799 61	24 10	18,778 06	19,078 33	54,993 89
Isle Royal	----------	----------	----------	----------	----------	----------	----------
Jackson	11,048 71	8,690 69	14,501 25	1,479 85	72,602 91	2,760 83	112,814 58
Kalamazoo	20,953 07	18,807 60	11,841 77	770 56	54,824 16	26,456 99	134,941 49
Kalkaska	4,040 66	2,005 37	1,320 80	98 66	7,866 19	856 05	16,192 73
Kent	38,075 44	17,982 24	28,744 25	5,079 65	117,459 47	22,563 59	232,687 70
Keweenaw	989 71	1,031 70	2,149 01	28 63	12,545 96	124 86	16,933 87
Lake	4,137 54	1,534 52	1,071 64	4 44	10,423 77	3,705 84	20,915 25
Lapeer	14,968 95	11,475 74	11,637 74	506 37	23,547 76	8,577 49	71,585 02
Leelanaw	1,788 36	553 78	2,523 84	----------	7,916 51	424 85	13,260 54
Lenawee	24,449 69	25,618 72	17,785 72	601 23	60,040 11	3,023 57	133,091 85
Livingston	10,675 23	8,946 29	8,370 74	382 44	21,059 38	2,078 79	52,312 66
Mackinac	3,581 79	799 25	856 11	----------	2,000 07	10,834 83	18,072 05
Macomb	17,207 17	16,539 47	13,230 00	302 82	14,893 70	4,799 10	68,032 45
Manistee	5,848 96	1,476 88	4,679 99	19 15	35,299 50	5,426 16	52,769 14
Manitou	85 56	41 00	293 08	----------	630 00	171 58	1,241 22
Marquette	19,263 44	4,374 75	9,228 51	832 33	56,621 74	3,738 92	94,059 69
Mason	3,783 87	1,142 90	3,175 11	510 38	20,413 13	2,186 24	31,235 13
Mecosta	16,799 95	2,775 30	5,399 11	1,079 33	30,324 28	8,819 72	65,250 29
Menominee	7,120 59	1,507 20	2,565 54	1 44	23,481 30	4,620 10	44,306 17
Midland	4,058 42	1,768 29	2,617 35	130 84	16,449 93	2,855 76	27,783 25
Missaukee	4,045 01	969 50	422 21	----------	6,682 19	1,436 64	13,561 55
Monroe	14,578 03	14,366 99	14,510 81	380 93	14,431 33	1,961 39	60,687 18
Montcalm	19,280 02	7,098 12	9,967 41	353 06	43,794 72	7,381 92	88,189 12
Montmorency	----------	167 73	----------	----------	403 31	908 54	1,570 33
Muskegon	12,795 51	3,721 00	10,379 97	960 01	61,386 67	4,577 03	93,973 19
Newaygo	10,283 80	1,578 99	5,214 76	105 01	24,014 31	4,206 84	45,479 71
Oakland	21,203 39	24,112 78	14,633 77	475 78	38,395 65	2,855 02	104,390 36
Oceana	6,616 51	1,673 58	3,972 79	4 78	21,101 80	4,002 31	37,511 57

TABLE V.—*Continued.*

Counties.	Moneys on hand Sept. 5, 1881.	One-Mill Tax.	Primary School Interest Fund.	Library Moneys.	District Taxes for all Purposes.	Raised from all other Sources.	Total Resources for the Year.
Ogemaw	$1,819 31	$461 26	$471 57	----------	$4,783 88	$667 48	$8,212 68
Ontonagon	9,047 10	1,244 71	1,273 29	$4 48	10,100 00	819 93	22,513 51
Osceola	6,758 28	1,535 54	3,854 38	79 00	21,978 31	3,269 71	37,479 22
Oscoda	477 30	537 39	86 19	14 00	1,054 03	127 46	2,296 37
Otsego	1,976 05	516 59	610 63	----------	5,820 19	2,460 15	11,383 61
Ottawa	14,881 77	4,916 75	14,952 80	655 38	51,756 05	7,745 92	95,128 21
Presque Isle	2,239 06	944 46	1,033 71	----------	1,914 23	978 28	7,111 26
Roscommon	1,180 16	797 55	10 44	----------	3,115 19	----------	5,103 34
Saginaw	29,902 45	11,957 75	23,868 65	797 66	97,722 94	3,185 15	167,657 31
St. Clair	21,904 07	12,820 13	19,793 07	224 37	39,733 81	4,572 00	99,379 66
St. Joseph	12,974 99	16,158 53	10,426 43	829 58	35,442 07	2,192 53	79,873 31
Sanilac	10,421 43	3,670 64	12,195 93	305 39	19,598 34	12,044 15	58,236 08
Schoolcraft	3,291 62	3,380 14	19 08	----------	2,743 65	1,045 04	10,479 53
Shiawassee	17,508 78	10,415 93	9,923 17	275 39	36,259 08	26,178 68	101,070 21
Tuscola	16,130 57	6,470 15	10,982 51	104 46	18,501 12	5,989 34	68,504 20
Van Buren	15,027 56	10,473 73	11,250 55	211 33	38,244 42	5,229 27	81,674 47
Washtenaw	19,865 10	25,105 50	15,463 36	403 96	52,252 85	2,987 38	121,960 85
Wayne	78,499 06	20,928 19	67,879 93	8,821 56	234,625 38	17,005 46	429,025 28
Wexford	5,250 16	1,472 11	2,229 19	5 88	11,475 28	5,839 74	26,288 39
Totals	$367,882 28	$314,504 56	$626,673 56	$33,594 33	$2,259,501 47	$373,354 36	$4,735,026 74

TABLE VI.

Expenditures of School Districts (Including amount on hand), as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	Paid Teachers.	Paid for Building and Repairs.	Paid for Library books and care of Library.	Paid on Bonded Indebtedness.	Paid for all other Purposes.	Amount on hand September 4, 1882.	Total Expenditures for the Year, including Amount on hand.
Alcona	$6,780 00	$691 60	$15 00	$923 20	$2,322 61	$3,665 24	$14,397 65
Allegan	43,854 23	5,396 26	245 33	2,529 28	11,689 28	18,171 28	81,695 66
Alpena	13,007 00	3,724 18	502 00	100 00	9,199 30	36 70	26,569 18
Antrim	10,856 33	3,578 80	12 00	625 50	2,988 98	5,336 44	23,398 05
Baraga	3,833 40	202 30	15 00	----------	880 25	3,221 01	8,151 96
Barry	28,263 77	3,710 75	26 85	20,934 76	6,576 56	12,930 54	72,443 23
Bay	43,704 85	25,634 86	1,000 05	10,954 98	16,274 94	24,276 96	121,846 64
Benzie	6,014 98	1,835 33	----------	298 57	1,680 82	2,236 79	12,066 54
Berrien	50,647 55	8,636 42	77 48	14,986 59	12,967 03	23,580 10	110,895 17
Branch	35,581 66	5,941 88	32 91	4,447 34	9,455 48	16,626 89	73,086 16
Calhoun	54,564 69	7,470 79	491 53	23,181 92	14,783 49	15,947 42	116,439 84
Cass	31,185 05	6,752 23	383 36	3,915 19	7,002 39	14,420 12	63,683 34
Charlevoix	9,546 17	2,625 81	--- ----------	452 49	2,978 14	4,014 60	19,617 21
Cheboygan	8,705 90	1,913 74	----------	1,176 00	3,008 29	4,955 72	19,759 65
Chippewa	3,910 82	1,718 21	----------	722 41	627 96	829 89	7,839 29
Clare	5,654 07	3,289 85	----------	659 90	2,477 24	4,391 89	16,672 95
Clinton	34,192 24	4,144 95	96 28	3,874 39	8,201 35	16,427 69	66,936 90
Crawford	2,737 68	1,145 96	----------	664 63	1,136 90	2,155 59	7,840 76
Delta	8,614 76	750 17	6 00	492 20	2,382 85	3,086 00	15,331 98
Eaton	37,964 95	4,866 94	27 94	6,965 94	7,113 20	14,047 28	70,986 25
Emmet	7,866 30	4,608 80	----------	1,597 45	3,104 45	4,113 10	21,290 10
Genesee	52,139 90	5,760 30	920 82	11,041 19	12,401 80	21,909 83	104,173 84
Gladwin	2,546 15	337 79	----------	1,283 33	1,707 74	2,746 75	8,621 76
Grand Traverse	13,976 70	2,444 17	----------	1,504 50	4,181 45	3,996 56	26,103 38
Gratiot	27,146 62	3,398 46	190 17	4,553 17	9,778 05	10,371 75	55,438 22

TABLE VI.—*Continued.*

Counties.	Paid Teachers.	Paid for Building and Repairs.	Paid for Library books and care of Library.	Paid on Bonded Indebtedness.	Paid for all other Purposes.	Amount on hand September 4, 1882.	Total Expenditures for the Year, including Amount on hand.
Hillsdale	$39,620 68	$8,056 16	$50 04	$4,131 30	$9,258 57	$14,071 39	$75,188 14
Houghton	43,431 25	2,885 22	159 95	1,193 95	21,029 05	27,539 91	96,239 33
Huron	19,443 75	10,205 02	189 28	1,728 72	6,074 39	9,648 66	47,289 82
Ingham	43,018 64	8,007 47	494 62	2,946 90	14,728 97	15,688 24	84,894 84
Ionia	42,083 19	17,732 73	95 35	9,392 93	9,821 40	19,765 12	98,890 71
Iosco	9,455 82	1,391 06	15 00	8,315 72	2,641 29	4,229 31	26,048 20
Isabella	17,768 51	20,600 24	4 00	2,549 47	3,954 26	10,117 41	54,993 89
Isle Royal.							
Jackson	62,828 82	6,256 72	108 69	7,208 41	19,200 89	17,211 05	112,814 58
Kalamazoo	50,483 02	36,530 27	1,723 18	9,550 18	17,961 96	18,692 88	134,941 49
Kalkaska	6,902 00	1,290 60	6 00	1,641 53	2,575 82	3,776 78	16,192 73
Kent	111,390 80	37,994 43	3,825 99	19,709 52	36,433 92	23,333 04	232,687 70
Keweenaw	9,916 00	372 93	148 30	349 20	2,946 75	3,200 69	16,933 87
Lake	7,517 47	3,640 59	30 65	1,473 33	3,211 81	5,041 40	20,915 25
Lapeer	36,931 53	5,321 51	185 89	1,695 74	7,177 25	20,273 10	71,585 02
Leelanaw	8,084 77	501 80	25 00	690 57	1,149 25	2,808 85	13,260 54
Lenawee	64,077 16	14,329 57	512 99	16,151 62	13,893 04	24,127 47	133,491 85
Livingston	28,622 89	3,772 92	27 72	3,339 56	5,576 33	10,973 24	52,312 66
Mackinac	4,216 43	3,319 10			1,548 39	8,488 13	17,072 05
Macomb	35,083 00	5,723 98	79 54	1,223 54	7,214 41	18,707 98	68,032 45
Manistee	17,923 37	13,575 24	380 16	677 75	6,359 83	13,852 79	52,769 14
Manitou	895 00	25 33			127 98	192 91	1,241 22
Marquette	39,482 75	11,158 19	991 80	1,419 58	17,128 88	23,888 49	94,069 69
Mason	14,419 30	6,460 53	555 21	1,245 51	2,997 13	5,557 45	31,235 13
Mecosta	22,231 61	15,271 26	863 08	5,680 73	6,882 17	14,321 44	65,250 29
Menominee	14,034 25	8,340 31	15 25	5,354 60	8,711 38	7,850 28	44,306 17
Midland	10,636 43	2,157 57	27 42	4,499 98	4,802 23	5,609 62	27,733 25
Missaukee	4,718 36	2,985 17	4 00	120 00	1,862 95	3,876 07	13,561 55
Monroe	30,972 95	3,293 73	541 15	4,265 19	5,386 17	16,248 94	60,687 18
Montcalm	42,053 39	8,930 19	259 90	5,635 72	10,114 33	21,195 59	88,189 12
Montmorency	358 34	320 25			155 65	736 09	1,570 33
Muskegon	40,255 46	5,066 84	498 84	13,741 23	17,576 63	16,814 19	93,973 19
Newaygo	20,474 00	4,469 64	18 00	3,101 36	5,822 56	11,538 15	45,479 71
Oakland	53,259 79	8,370 52	170 37	9,023 07	12,298 48	18,368 13	104,390 36
Oceana	18,214 62	5,095 98	8 25	1,088 77	7,343 45	5,760 50	37,511 57
Ogemaw	3,451 03	729 06		497 54	1,460 56	2,074 49	8,212 68
Ontonagon	8,893 50	469 09	50 00		2,761 60	10,339 32	22,513 51
Osceola	17,574 30	5,104 70	111 66	2,861 12	4,765 78	7,061 66	37,479 22
Oscoda	699 00	297 82			248 82	1,051 23	2,296 87
Otsego	4,478 72	1,422 85		714 16	2,032 80	2,735 06	11,383 61
Ottawa	43,724 40	13,515 79	573 59	8,848 37	14,124 14	14,341 92	95,128 21
Presque Isle	2,389 50	1,533 11	37 22	164 00	948 06	2,030 37	7,111 26
Roscommon	1,620 00	1,503 49		56 80	683 50	1,239 55	5,103 34
Saginaw	79,616 38	17,205 12	1,543 70	16,531 41	20,573 64	32,188 06	167,657 31
St. Clair	47,352 68	7,415 98	399 96	7,932 56	10,629 15	25,649 35	99,379 68
St. Joseph	41,492 75	6,018 19	180 87	6,399 43	10,808 60	14,973 47	79,873 31
Sanilac	24,462 04	10,084 51	7 50	1,478 68	7,410 61	14,822 74	58,266 08
Schoolcraft	2,977 00	3,539 63		1,719 50	1,359 21	884 19	10,479 53
Shiawassee	33,544 54	12,462 94	227 55	19,385 97	9,643 13	25,807 08	101,070 21
Tuscola	31,548 01	9,032 46	34 77	3,023 54	8,865 71	15,999 71	68,504 20
Van Buren	40,208 22	6,990 30	97 50	5,661 46	10,241 32	18,475 67	81,674 47
Washtenaw	69,424 07	7,782 88	627 29	6,907 80	18,943 51	18,295 30	121,980 85
Wayne	210,939 24	64,723 51	11,661 06	1,571 06	66,176 19	73,904 20	429,025 28
Wexford	11,706 67	2,888 65	43 20	1,333 60	3,505 38	6,810 89	26,288 39
Totals	$2,193,267 18	$367,283 80	$31,658 21	$353,017 61	$644,064 13	$945,735 81	$4,735,026 74

TABLE VII.

Miscellaneous Financial Statistics, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	Bonded Indebtedness of the Districts.	Total Indebtedness of the Districts.	Amount due the Districts.	Amount Received by the Districts for non-resident Tuition.	Amount Paid and due Inspectors for Services.	Amount Paid and due Township Chairmen for Services.
Alcona	$1,400 00	$2,366 52	$769 28	----------	$60 50	$13 50
Allegan	4,972 47	6,181 35	1,572 01	$1,186 53	320 25	277 90
Alpena	3,000 00	6,790 47	4,858 82	----------	314 00	4 00
Antrim	6,940 00	8,515 11	1,856 18	15 24	92 00	106 95
Baraga	----------	----------	----------	----------	10 00	39 16
Barry	37,910 00	39,183 95	1,770 20	636 60	341 38	179 63
Bay	18,351 30	18,596 30	2,342 14	184 37	301 52	243 76
Benzie	801 00	1,411 94	637 08	28 99	62 50	53 00
Berrien	45,626 25	46,119 36	6,506 00	1,058 07	162 25	162 25
Branch	2,278 24	17,118 49	1,421 25	969 51	341 25	235 42
Calhoun	85,543 67	86,756 09	2,061 06	2,043 07	369 25	291 03
Cass	14,925 37	17,169 62	2,385 82	498 71	278 16	259 21
Charlevoix	5,580 00	6,403 09	1,054 32	34 64	170 83	107 00
Cheboygan	12,606 00	13,722 49	2,404 58	33 50	124 25	141 75
Chippewa	4,576 60	5,060 68	263 38	----------	57 00	25 00
Clare	2,949 48	3,782 04	1,445 29	----------	106 25	66 50
Clinton	7,074 65	8,691 41	1,508 56	744 63	281 01	210 91
Crawford	1,449 00	2,216 14	623 96	1 69	111 26	97 50
Delta	26,045 00	26,315 00	928 91	6 50	277 50	86 00
Eaton	7,140 96	8,500 78	1,826 26	788 15	310 50	331 90
Emmet	15,238 30	17,441 72	3,104 03	34 60	83 75	94 75
Genesee	81,351 00	81,964 50	996 37	2,421 48	572 04	422 09
Gladwin	1,371 00	2,342 50	3,172 60	----------	70 25	51 75
Grand Traverse	3,885 00	4,247 12	1,843 66	180 83	59 05	69 50
Gratiot	20,310 10	22,972 77	3,188 97	445 10	356 90	214 30
Hillsdale	7,891 39	8,533 17	2,276 11	957 56	414 16	391 95
Houghton	16,500 00	16,594 35	900 85	----------	63 00	58 00
Huron	10,346 00	11,771 16	2,525 40	42 72	208 85	231 93
Ingham	68,397 86	72,452 22	1,156 72	764 11	853 20	318 45
Ionia	28,623 50	30,554 24	1,662 66	1,176 41	244 43	239 18
Iosco	12,820 00	14,528 51	1,276 23	7 00	75 00	36 00
Isabella	19,649 28	20,907 03	4,766 11	63 59	272 00	374 25
Isle Royal	----------	----------	----------	----------	----------	----------
Jackson	15,755 73	16,273 53	2,326 13	1,730 34	243 25	159 20
Kalamazoo	31,568 17	32,469 93	1,573 72	1,287 34	204 00	259 75
Kalkaska	976 00	1,496 15	1,443 02	5 00	121 12	153 81
Kent	108,891 92	110,268 82	4,124 61	2,783 06	248 30	372 20
Keweenaw	401 95	423 31	436 76	4 00	52 00	4 56
Lake	5,665 70	7,733 19	1,352 83	37 50	110 20	81 25
Lapeer	3,663 20	4,944 12	3,146 16	807 97	282 50	132 50
Leelanaw	922 86	1,730 33	1,033 63	53 20	81 75	148 25
Lenawee	26,565 67	29,744 18	3,495 90	1,577 81	474 55	389 14
Livingston	15,773 33	17,395 03	1,559 91	799 79	271 75	351 97
Mackinac	6,900 00	8,513 89	1,334 99	----------	54 00	20 00
Macomb	5,110 00	5,598 46	946 49	1,060 19	68 50	239 00
Manistee	15,777 16	19,847 65	6,390 70	18 50	334 95	108 75
Manitou	40 00	55 53	311 82	20 00	23 00	17 00
Marquette	53,650 00	55,170 00	4,051 39	----------	408 75	174 54
Mason	9,935 00	10,274 58	852 95	23 50	185 50	111 00
Mecosta	11,205 00	13,143 05	2,812 69	52 60	337 45	182 09
Menominee	16,550 00	17,800 97	618 00	10 00	104 50	97 00
Midland	12,088 45	15,552 08	11,019 83	52 66	115 25	48 00
Missaukee	1,835 00	3,247 86	2,106 48	----------	94 00	74 00
Monroe	3,718 67	3,984 68	4,194 33	457 70	216 25	422 00
Montcalm	12,400 00	14,895 51	6,112 60	313 87	422 37	313 62
Montmorency	1,750 00	2,620 64	2,183 02	75	55 60	18 60
Muskegon	31,500 00	32,182 69	2,423 46	153 00	186 75	247 00
Newaygo	11,591 25	12,096 29	4,271 96	71 00	166 96	141 00
Oakland	22,270 00	23,157 52	1,360 31	2,713 97	311 93	481 67
Oceana	2,410 00	2,870 58	1,302 07	139 80	297 77	273 50

TABLE VII.—*Continued.*

Counties.	Bonded Indebtedness of the Districts.	Total Indebtedness of the Districts.	Amount due the Districts.	Amount Received by the Districts for non-resident Tuition.	Amount Paid and due Inspectors for Services	Amount Paid and due Township Chairmen for Services.
Ogemaw	$180 00	$1,620 94	$3,266 18	$9 18	$114 74	$76 50
Ontonagon	450 00	450 00	1,736 92	24 00	29 00	15 00
Osceola	8,329 00	12,032 06	2,195 08	4 00	243 00	157 55
Oscoda	----------	312 15	671 91	50	98 50	29 00
Otsego	2,607 61	3,663 99	816 51	----------	132 00	149 50
Ottawa	26,213 00	29,168 61	1,788 00	219 54	326 58	415 91
Presque Isle	4,550 00	8,896 86	1,145 77	1 50	116 12	49 12
Roscommon	682 00	1,314 75	475 00	----------	58 50	22 00
Saginaw	16,163 05	17,584 58	5,680 33	222 71	503 00	472 93
St. Clair	37,450 00	39,600 32	1,564 09	332 23	268 26	339 27
St. Joseph	18,476 00	19,464 88	716 26	1,348 88	106 35	301 25
Sanilac	12,758 00	16,054 57	4,119 60	30 20	266 90	281 47
Schoolcraft	2,200 00	2,200 00	830 11	----------	127 00	22 50
Shiawassee	29,573 00	29,981 56	1,937 11	509 18	287 15	258 58
Tuscola	16,302 00	19,158 00	3,359 23	326 05	189 75	279 62
Van Buren	20,268 30	21,406 80	2,827 30	1,237 61	198 50	174 55
Washtenaw	21,272 54	22,219 53	4,928 59	5,902 72	347 25	250 40
Wayne	20,977 28	21,457 78	49,362 79	1,265 70	4,126 25	354 55
Wexford	3,033 00	4,113 05	1,174 88	16 03	258 50	156 75
Totals	$1,246,119 06	$1,363,411 12	$228,483 36	$40,513 18	$22,429 59	$14,262 37

TABLE VIII.

Statistics of Township Libraries, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	No. of Townships reporting Library Moneys used for General School Purposes.	No. of Townships forfeiting their Library Moneys.	No. of Townships maintaining Libraries.	No. of Vols added to Libraries during year.	Whole No. of Vols. in Libraries.	Amount paid for Books and care of Libraries.	Amount of Taxes voted for Libraries.	Amount of fines, etc., received from County Treasurer for support of Libraries.
Alcona	1	3	----------	----------	----------	----------	----------	----------
Allegan	9	8	7	139	1,410	$235 72	----------	$125 59
Alpena	1	1	3	----------	362	30 00	----------	----------
Antrim	2	1	11	60	1,860	67 00	$20 00	14 27
Baraga	2	2	2	----------	184	----------	----------	----------
Barry	11	2	3	29	1,036	15 16	----------	78 21
Bay	4	5	10	86	1,553	224 37	26 00	134 36
Benzie	----------	----------	11	57	1,115	70 62	27 35	120 53
Berrien	7	7	8	51	3,097	189 51	200 00	300 65
Branch	5	8	3	99	1,313	196 52	----------	102 73
Calhoun	15	3	2	----------	120	----------	----------	84 36
Cass	4	8	3	35	936	44 77	----------	319 01
Charlevoix	3	6	6	115	841	95 82	71 51	1 24
Cheboygan	5	2	4	123	507	171 89	226 00	388 16
Chippewa	1	3	----------	----------	----------	----------	----------	----------
Clare	----------	4	4	44	267	59 00	281 27	----------
Clinton	12	1	3	14	425	12 95	----------	143 59
Crawford	3	3	2	50	68	50 00	100 00	----------
Delta	1	5	4	1	535	5 75	----------	----------
Eaton	7	4	6	127	2,555	156 63	----------	21 37

TABLE VIII.—*Continued.*

Counties.	No. of Townships reporting Library Moneys used for General School Purposes.	No. of Townships forfeiting their Library Moneys.	No. of Townships maintaining Libraries.	No. of Vols. added to Libraries during year.	Whole No. of Vols. in Libraries.	Amount paid for Books and care of Libraries.	Amount of Taxes voted for Libraries.	Amount of fines, etc., received from County Treasurer for support of Libraries.
Emmet	2	3	6	266	474	$320 52	$33 98	$399 12
Genesee	12	5	1	33	264	43 84	.....	125 68
Gladwin	2	1	1	.....	192	44 43	.....	.....
Grand Traverse	3	1	7	13	990	13 00	.....	49 98
Gratiot	15	1	4	2	133	.....	30 53	61 44
Hillsdale	12	6	1	.....	200	10 00	.....	175 47
Houghton	1	3	3	3	1,311	159 50	200 00	422 25
Huron	11	9	9	20	1,132	53 15	.....	39 67
Ingham	10	5	.....	.....	.....	.....	.....	619 16
Ionia	14	.....	3	6	115	.....	.....	150 68
Iosco	1	4	5	94	853	177 91	.....	139 39
Isabella	2	7	7	51	543	19 67	.....	.....
Isle Royal	.....	.....	.....	.....	.....	.....	.....	.....
Jackson	13	5	1	44	596	42 11	.....	361 77
Kalamazoo	5	8	2	249	749	22 00	.....	159 84
Kalkaska	5	3	3	16	157	93 34	.....	.....
Kent	9	6	9	242	2,566	397 39	55 00	176 73
Keweenaw	1	1	4	37	1,521	66 63	.....	11 44
Lake	3	2	8	113	779	137 00	120 00	6 35
Lapeer	8	3	8	139	1,340	211 84	.....	151 15
Leelanaw	2	.....	9	10	1,421	78 39	.....	.....
Lenawee	6	9	9	149	7,860	176 53	.....	141 24
Livingston	14	.....	2	.....	608	6 00	.....	582 34
Mackinac	.....	4	4	10	245	.....	30 88	.....
Macomb	6	4	4	1	1,007	50 00	.....	96 87
Manistee	2	3	7	48	988	95 28	.....	60 06
Manitou	2	1	.....	.....	.....	.....	.....	.....
Marquette	3	3	7	69	1,860	112 55	150 00	93 75
Mason	2	.....	11	106	2,023	133 49	212 21	105 10
Mecosta	7	4	5	35	283	44 53	50 00	167 95
Menominee	2	3	4	318	1,781	478 56	450 00	232 84
Midland	3	3	9	.....	519	18 50	.....	168 98
Missaukee	.....	5	6	155	378	152 80	110 00	30 17
Monroe	4	3	10	27	2,674	60 35	.....	62 85
Montcalm	5	9	7	218	745	468 23	.....	175 47
Montmorency	.....	3	.....	.....	.....	.....	250 00	.....
Muskegon	6	1	12	454	2,2?0	722 37	.....	201 34
Newaygo	1	9	10	269	1,417	352 04	120 64	140 52
Oakland	15	7	5	97	1,667	156 72	.....	383 39
Oceana	2	1	13	270	2,175	330 91	270 00	45 29
Ogemaw	5	6	.....	.....	.....	.....	.....	.....
Ontonagon	3	1	1	.....	1,0.0	50 00	.....	.....
Osceola	1	7	9	177	1,577	287 03	100 00	83 99
Oscoda	.....	3	.....	.....	.....	.....	.....	.....
Otsego	1	2	5	145	1,179	302 60	262 80	.....
Ottawa	4	2	9	31	1,749	159 34	25 00	422 46
Presque Isle	3	5	1	6	12	22 95	.....	.....
Roscommon	4	.....	.....	.....	.....	.....	.....	.....
Saginaw	7	11	12	219	3,422	419 53	95 70	119 29
St. Clair	8	8	9	60	2,316	78 95	11 83	145 79
St. Joseph	7	5	5	349	1,397	391 09	78 00	216 25
Sanilac	10	5	13	136	963	143 20	.....	314 91
Schoolcraft	.....	3	2	.....	500	50 00	200 00	25 00
Shiawassee	13	1	2	53	243	15 00	25 00	83 16
Tuscola	6	6	11	156	1,331	115 41	101 65	135 06
Van Buren	6	5	8	64	1,393	117 85	150 00	168 23
Washtenaw	7	8	6	5	1,815	87 20	.....	131 78
Wayne	5	12	3	20	3,805	281 77	.....	432 29
Wexford	3	4	9	123	755	136 57	.....	45 70
Totals	397	315	413	6,138	84,957	$9,581 78	$4,090 74	$9,906 26

TABLE IX.

Statistics of School District Libraries, as reported by School Inspectors for the Year ending September 4, 1882.

Counties.	No. Districts of less than 100 children, reporting Libraries.	Whole No. Vols. reported by Dists. of less than 100 children.	No. Dists. of 100 or more children, maintaining Libraries.	No. of Vols. added during year to last mentioned Libraries.	Whole No. of Vols. in such Libraries.	Amount paid for support of such Libraries.	Am't of fines, etc., rec'd from Co. Trs. for such Libraries.
Alcona							
Allegan	52	2,972	15	99	1,502	$126 42	$126 59
Alpena			4	200	2,262	502 00	100 02
Antrim	6	118					
Baraga	1	162	1		200	15 00	
Barry	16	463	2	22	306		341 85
Bay	13	1,024	6	1,330	11,574	881 25	234 74
Benzie							
Berrien	35	1,336	7	22	1,062	61 81	160 65
Branch	27	1,094					
Calhoun	47	1,807	4	755	5,132	13 75	80 10
Cass	45	2,403	5	15	716	145 82	88 81
Charlevoix							
Cheboygan							
Chippewa	1	14					
Clare							
Clinton	6	184	3	19	153	64 63	22 76
Crawford	1	9					
Delta							
Eaton	2	25	1		88	23 94	100 00
Emmet	1	15					
Genesee	28	819	6	548	3,719	822 34	809 71
Gladwin							
Grand Traverse	10	348					
Gratiot	8	273	3	103	400	174 91	13 34
Hillsdale	41	1,045	3	1	336	10 00	220 73
Houghton			6	33	2,600	2,172 75	188 51
Huron	4	70	7	115	411	189 28	94 59
Ingham	5	153	3	2,242	3,661	471 42	191 61
Ionia	5	149	2	25	333	65 55	74 37
Iosco	1	16	1	2	4	15 00	
Isabella	6	157	2	4	160	427 00	
Isle Royal							
Jackson	27	1,207	9	142	3,180	64 47	771 88
Kalamazoo	70	3,725	5	256	8,823	1,420 17	346 58
Kalkaska	9	201	1	163			
Kent	16	435	8	832	13,230	3,825 99	5,762 40
Keweenaw			3	100	1,467	148 30	28 63
Lake	2	106					
Lapeer	16	599	5	97	542	152 89	63 46
Leelanaw							
Lenawee	70	3,886	11	386	2,109	380 87	478 56
Livingston	7	201	1		102		111 30
Mackinac							
Macomb	11	269	9	68	1,857	78 04	50 35
Manistee	12	706	4	241	2,051	360 21	
Manitou							
Marquette			7	360	4,878	991 80	782 33
Mason			1	399	900	555 21	510 38
Mecosta	7	487	3	995	1,045	750 28	1,002 38
Menominee	1	30					
Midland	6	455	2	10	772	23 75	27 48
Missaukee	6	220					
Monroe	6	177	1	240	2,240	531 02	375 80
Montcalm	14	338	4	52	417	245 51	110 71
Montmorency							
Muskegon	1	84	2	27	2,304	467 58	416 71
Newaygo	13	552					
Oakland	38	1,484	2	27	666	83 53	109 65
Oceana	7	290					

TABLE IX.—*Continued.*

Counties.	No. Districts of less than 100 children, reporting Libraries.	Whole No. Vols. reported by Dists of less than 100 children	No. Dists. of 100 or more children maintaining Libraries.	No. of Vols. added during year to last mentioned Libraries.	Whole No. of Vols. in such Libraries.	Amount paid for support of such Libraries.	Am't of fines, etc., rec'd from Co. Trs. for such Libraries.
Ogemaw							
Ontonagon	2	170	4		1,000	$30 00	
Osceola	1	40	1	1	13		
Oscoda							
Otsego							
Ottawa	19	554	11	204	2,108	468 97	$385 13
Presque Isle	6	283	2	3	9		
Roscommon							
Saginaw	44	1,905	13	615	10,772	1,401 39	561 10
St. Clair	22	892	9	2	1,191	345 53	73 71
St. Joseph	53	2,224	6	70	1,416	62 20	294 89
Sanilac	11	485	6	9	270	2 80	53 40
Schoolcraft							
Shiawassee	14	230	1	197	233	137 95	26 05
Tuscola	15	532	7	17	425	7 04	22 16
Van Buren	12	453	3	17	276	81 75	30 31
Washtenaw	9	259	5	449	2,420	927 29	286 70
Wayne	61	13,629	32	2,763	53,101	10,740 85	7,730 19
Wexford	5	103	1	5	6	41 20	
Totals	991	51,597	260	14,232	126,251	$30,281 66	$23,165 24

TABLE X.

Miscellaneous Items, as reported by School Inspectors for the Year ending Sept. 4, 1882.

Counties.	Private and Select Schools.				Miscellaneous.		
	No. of Private or Select Schools.	No. of Teachers Employed in Private or Select Schools.		Estimated No. of Pupils attending Private or Select Schools.	Number Districts having a Dictionary.	Number Districts having a Globe.	Number Districts having Maps.
		Men.	Women.				
Alcona					7	4	5
Allegan	6	3	4	270	92	56	69
Alpena	6	1	5	550	3	1	7
Antrim	1		1	15	11	14	22
Baraga	1	1		12	2	2	4
Barry	5	2	4	140	78	5	23
Bay	8	5	13	633	25	31	47
Benzie	1	3	3	50	8	5	13
Berrien	9	4	5	210	54	30	27
Branch	2	1	1	25	49	18	19
Calhoun	2	5	4	370	105	19	28
Cass	1		1	15	81	22	27
Charlevoix	1	1		7	11	6	6
Cheboygan	2		3	150	10	6	9
Chippewa	2		5	49			3
Clare					5	3	4
Clinton	5	1	8	352	73	19	18
Crawford					1	2	3
Delta					7	5	8
Eaton	1		1	11	52	11	16
Emmet					6	1	4
Genesee	10	9	13	784	102	23	57
Gladwin					3	1	5
Grand Traverse					20	18	19
Gratiot	1	1			35	14	25

TABLE X.—*Continued.*

Counties.	Private and Select Schools.				Miscellaneous.		
	No. of Private or Select Schools.	No. of Teachers Employed in Private or Select Schools.		Estimated No. of Pupils attending Private or Select Schools.	Number Districts having a Dictionary.	Number Districts having a Globe.	Number Districts having Maps.
		Men.	Women.				
Hillsdale					99	30	27
Houghton	6	1	11	710	11	12	17
Huron	11	7	6	355	18	19	43
Ingham	5			250	65	17	13
Ionia	4	3	3	203	62	20	31
Iosco	1		1	25	9	5	9
Isabella	7	4	6	183	18	15	18
Isle Royal							
Jackson	3		6	400	97	39	72
Kalamazoo	6	1	4	222			
Kalkaska					10	5	16
Kent	2	1	1	56	125	43	77
Keweenaw					6	7	7
Lake					18	9	11
Lapeer					55	23	38
Leelanaw					11	6	21
Lenawee	4	3	4	215	109	46	51
Livingston	1	1		15	42	11	18
Mackinac	2		2	30	3	3	4
Macomb	18	15	4	1,487	63	21	42
Manistee	4	3	5	630	22	15	19
Manitou					2	1	
Marquette	4		7	110	10	12	17
Mason	4	3	3	146	21	11	21
Mecosta	1		1	100	22	19	35
Menominee	1		2	140	11	9	11
Midland					8	7	14
Missaukee					7	5	13
Monroe	9	6	4	370	33	14	23
Montcalm	3		3	25	57	33	45
Montmorency	1		1	21			1
Muskegon	1	1		40	36	33	56
Newaygo	2		4	28	34	28	33
Oakland	1		1	20	106	26	47
Oceana	1		2	12	46	32	22
Ogemaw					6	6	12
Ontonagon					6	5	8
Osceola					19	15	20
Oscoda							1
Otsego					8	8	9
Ottawa	5	5		210	77	31	55
Presque Isle	1	1		26	1		1
Roscommon					1	1	3
Saginaw	17	13	10	1,306	57	37	69
St. Clair	9	6	3	518	56	25	48
St. Joseph	4	1	3	58	65	21	18
Sanilac					31	19	27
Schoolcraft					1		
Shiawassee	1		1	15	37	13	17
Tuscola	1		1	16	35	17	23
Van Buren	1	3	3	100	73	24	33
Washtenaw	11	7	1	572	73	30	43
Wayne	52	7	5	8,270	76	33	54
Wexford	2	1	1	38	23	18	18
Totals	271	130	180	20,577	2,653	1,174	1,789

TABLE XI.

Statistics relating to School-houses destroyed by the Forest Fires of 1881, as furnished the Fire Relief Commission by the County Boards of School Examiners; also, the Valuation of New School buildings, and the Amounts paid from the State Appropriation in aid of the same.

Townships and Districts.	No. of Children of School Age.	Real or Estimated Value of School-houses Destroyed.	Amounts of Insurance.	Insurance Collectible.	Resources of School Districts	Bonded or other Indebtedness.	Appraised Value of new School Buildings.	Amounts paid from State Appropriation.
HURON COUNTY:								
Bingham, No. 1	93	$350 00	*a*	*a*	*b*	*b*	$697 10	$511 50
Bloomfield, No. 2	62	350 00	*a*	*a*	*b*	*b*	625 00	341 00
Chandler, No. 2	64	175 00	*a*	*a*	*b*	*b*	618 15	352 00
Grant, No. 1	72	300 00	*a*	*a*	*b*	*b*	925 00	396 00
Huron, No. 1	65	550 00	*a*	*a*	*b*	*b*	800 00	357 50
Huron, No. 3	56	500 00	$375 00	*c*	*b*	*b*	797 73	308 00
Lincoln, No. 3	17	150 00	*a*	*a*	*b*	*b*	523 00	93 50
Meade, No. 4	42	300 00	*a*	*a*	*b*	*b*	350 00	231 00
Paris, No. 3	141	650 00	*a*	*a*	*b*	*b*	838 00	775 50
Rubicon, No. 1	79	1,400 00	828 00	*a*	*b*	*b*	585 50	434 50
Rubicon, No. 3	86	600 00	400 00	*a*	*b*	*b*	925 00	473 00
Rubicon, No. 4	41	425 00	275 00	$275 00	*b*	*b*	500 00	225 50
Verona, No. 1	79	550 00	400 00	*c*	*b*	*b*	900 00	434 50
Verona, No. 4	73	450 00	*a*	*a*	*b*	*b*	550 00	401 50
Verona, No. 5	37	328 00	180 00	*c*	*b*	*b*	657 75	203 50
SANILAC COUNTY:								
Argyle, No. 2	50	75 00	*b*	*b*	*b*	*b*	310 00	275 00
Argyle, No. 4	50	75 00	*b*	*b*	*d* $109 76	*b*	175 00	175 00
Austin, No. 1	80	500 00	*b*	*b*	84 22	*b*	597 33	440 00
Austin, No. 2	50	100 00	*b*	*b*	8 80	*b*	470 00	275 00
Austin, No. 3	69	440 00	*b*	*b*	60 02	*b*	650 00	379 50
Austin, No. 4	72	200 00	*b*	*b*	5 59	*b*	452 00	396 00
Delaware, No. 3	101	500 00	*b*	*b*	218 16	*b*	900 00	555 50
Delaware, No. 4	61	50 00	*b*	*b*	76 29	*b*	517 00	175 00
Elmer, No. 3	50	200 00	*b*	*b*	26 05	*b*	*e*	*e*
Evergreen, No. 1	19	150 00	*b*	*b*	*b*	$5 00	300 00	104 50
Evergreen, No. 2	28	150 00	*b*	*b*	28 49	*b*	575 00	154 00
Evergreen, No. 3	25	125 00	*b*	*b*	5 43	*b*	836 80	137 50
Evergreen, No. 4	31	150 00	*b*	*b*	57 76	81 75	700 00	170 50
Forester, No. 3	90	600 00	*b*	*b*	102 05	*b*	950 00	495 00
Greenleaf, No. 2	70	135 00	*b*	*b*	2 41	*b*	930 70	385 00
Lamotte, No. 1	25	350 00	*b*	*b*	34 25	140 00	550 00	137 50
Lamotte, No. 3	34	400 00	*b*	*b*	*b*	51 60	750 00	187 00
Lamotte, No. 4	25	230 00	*b*	*b*	*b*	300 00	450 00	137 50
Maple Valley, No. 4	50	150 00	*b*	*b*	42 73	*b*	246 75	246 75
Marion, No. 6	20	100 00	*b*	*b*	31 20	*b*	200 00	110 00
Marlette, No. 8	65	500 00	*b*	*b*	100 00	630 00	610 00	357 50
Minden, No. 2	84	600 00	400 00	*c*	55 82	*b*	703 09	462 00
Moore, No. 3	39	110 00	*b*	*b*	*b*	*b*	450 00	214 50
Washington, No. 3	116	600 00	*b*	*b*	134 10	*b*	703 88	638 00
Washington, No. 4	48	150 00	*b*	*b*	67 00	*b*	300 00	264 00
Watertown, No. 1	41	700 00	*b*	*b*	100 00	800 00	825 00	225 50
Watertown, No. 3	42	200 00	200 00	*c*	15 37	75 00	780 45	231 00
Watertown, No. 7	59	800 00	600 00	*c*	68 12	675 00	737 50	324 50
TUSCOLA COUNTY:								
Elkland, No. 6	22	140 00	*b*	*b*	*b*	*b*	320 00	121 00
Greenleaf, No. 1	87	650 00	*b*	*b*	*b*	*b*	568 50	478 50
Millington, No. 7	42	220 00	*b*	*b*	*b*	*b*	517 93	231 00
Novesta, No. 3	29	200 00	*b*	*b*	*b*	*b*	674 75	150 50
Novesta, No. 4	27	200 00	*b*	*b*	*b*	*b*	702 25	148 50
Fremont, No. 6	39	285 00	*b*	*b*	*b*	*b*	412 01	214 50
Totals (49)	2,747	$17,113 00					$28,968 12	$14,544 75

a None. *b* No report. *c* Doubtful. *d* Lost with assessor's life by the fire. *e* District has not reported the completion of its school building.

TABLE XII.

Examination and Certification of Teachers, as reported by the Secretaries of County Boards of School Examiners for the Year ending September 4, 1882.

Counties.	No. of Public Examinations held by Board. a	Whole No. of Applicants for regular Certificates.	Av. per cent of Correct Answers required to obtain Certificate of each grade.			Number of Applicants receiving Certificates.				No licensed without experience in teaching.	No of Applicants having attended Normal School.	No. of Applicants having attended Institutes during year.	No. of teachers holding State Certificates.	No. of teachers holding Normal Certificates.	Whole No. of legally qualified Teachers.
			First.	Second.	Third.	First.	Second.	Third.	Secretary's Special.						
Alcona	3	19	85	80	75	1	1	12	6	6	2	11	....	1	27
Allegan	8	411	90	80	75	9	25	230	97	73	20	10	....	5	375
Alpena	3	15	95	85	70	....	....	12	6	.....	.....	.....	....	....	18
Antrim	4	73	.....	.....	.....	6	1	39	23	6	.....	.....	....	2	50
Baraga	1	4	.....	.....	75	....	....	4	8	5	3	.....	....	3	10
Barry	9	275	90	80	70	1	20	216	44	142	50	100	....	5	240
Bay	5	96	90	85	75	1	13	72	22	21	22	46	....	....	120
Benzie	4	70	95	85	75	2	3	39	25	7	8	26	....	....	72
Berrien	7	391	90	80	75	5	16	228	28	80	290	248	....	4	249
Branch	7	340	95	85	75	2	38	201	45	40	75	100	....	3	240
Calhoun	8	365	90	80	75	4	18	212	111	69	113	150	....	6	366
Cass	7	205	95	85	75	2	2	139	30	30	47	60	....	6	146
Charlevoix	4	116	90	80	75	....	3	44	43	8	12	15	....	1	64
Cheboygan	5	61	90	75	60	1	3	30	39	13	7	29	....	....	45
Chippewa	2	17	.....	.....	.....	....	1	5	16	9	1	.....	....	1	20
Clare	4	33	.....	.....	70	....	1	22	27	4	1	1	....	1	31
Clinton	7	225	85	75	65	3	31	133	50	56	39	56	....	....	197
Crawford	4	37	90	80	70	....	4	13	18	9	6	3	1	1	13
Delta	3	35	80	75	65	1	....	23	18	5	4	19	....	1	24
Eaton	7	326	.....	.....	.....	1	4	218	43	70	45	50	....	3	269
Emmet	4	53	90	80	65	3	6	30	37	18	11	27	....	1	86
Genesee	10	327	90	80	75	2	21	187	62	47	35	54	....	2	263
Gladwin	4	18	90	80	65	....	....	12	9	3	2	2	....	....	12
Gd. Traverse	4	105	90	80	60	....	7	57	21	12	41	46	2	1	71
Gratiot	5	269	90	80	70	2	12	139	63	23	43	2	....	1	153
Hillsdale	9	337	95	85	70	1	26	237	84	57	91	181	....	3	307
Houghton	4	206	90	80	70	9	3	104	27	25	38	52	....	12	115
Huron	6	98	90	50	70	2	14	65	33	14	17	31	1	4	94
Ingham	8	300	90	80	75	....	2	195	90	33	24	73	....	7	209
Ionia	9	383	90	85	75	1	13	202	114	47	81	98	....	....	216
Iosco	2	32	90	80	75	....	....	23	13	9	.....	.....	....	5	39
Isabella	6	115	95	85	75	1	3	76	53	23	5	25	....	3	120
Isle Royal	....	.....	.....	.....	.....	....	....	....	.....	.....	.....	.....	....	....	.....
Jackson	9	286	90	80	75	2	11	194	81	58	38	73	....	13	227
Kalamazoo	8	315	90	85	75	1	2	227	76	39	33	8	3	....	230
Kalkaska	4	53	90	80	70	1	10	21	22	10	10	3	....	....	66
Kent	11	471	90	80	75	10	12	312	119	60	35	175	....	3	403
Keweenaw	3	28	95	85	75	2	2	13	8	1	1	5	....	3	20
Lake	6	57	90	85	75	5	3	37	.....	8	8	8	....	....	50
Lapeer	8	418	85	75	65	4	8	213	53	68	41	111	....	4	236
Leelanaw	4	68	90	80	75	....	4	34	29	9	12	21	....	....	55
Lenawee	10	440	95	85	70	1	21	301	44	75	40	75	....	....	390
Livingston	9	263	95	80	75	1	7	103	104	.....	.....	26	....	....	215
Mackinac	4	26	90	80	75	....	1	10	12	4	.....	2	....	....	14
Macomb	6	182	95	80	70	5	5	133	37	43	27	118	1	5	156
Manistee	4	79	90	80	75	....	3	43	26	11	8	40	....	....	50
Manitou	4	7	.....	90	76	....	3	3	2	2	.....	.....	....	....	7
Marquette	4	82	95	90	80	2	18	40	10	6	25	58	5	3	90
Mason	4	100	90	80	70	4	1	37	19	20	10	27	....	....	64
Mecosta	6	100	90	85	75	1	4	75	22	.....	.....	.....	2	1	85
Menominee	4	40	90	80	70	1	3	26	10	4	12	14	....	....	42
Midland	4	120	85	.....	.....	3	9	45	32	22	18	60	1	1	50
Missaukee	4	48	90	80	75	2	1	21	9	5	5	9	....	....	24
Monroe	8	291	90	80	70	2	10	175	34	65	49	50	....	....	150
Montcalm	8	175	90	85	75	5	5	112	143	20	25	75	3	3	175

a Including two regular examinations and all special public examinations in each county.

TABLE XII.—*Continued.*

Counties.	No. of Public Examinations held by Board. a	Whole No. of Applicants for regular Certificates.	Av. per cent of Correct Answers required to obtain Certificate of each grade.			Number of Applicants receiving Certificates.				No. licensed without experience in teaching.	No. of Applicants having attended Normal School.	No. of Applicants having attended Institutes during year.	No. of Teachers holding State Certificates.	No. of teachers holding Normal Certificates.	Whole No. of legally qualified Teachers.
			First.	Second.	Third.	First.	Second.	Third.	Secretary's Special.						
Montmorency	3	10	.....	.....	75	.....	.....	5	3	4	.....	.....	.....	.....	6
Muskegon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newaygo	5	128	90	85	75	2	4	77	58	22	2	61	.....	.....	126
Oakland	11	389	.....	.....	.....	.....	21	320	106	75	95	110	1	10	373
Oceana	6	109	.....	.....	.....	1	14	65	43	20	20	60	4	1	100
Ogemaw	4	30	90	80	75	3	2	17	14	2	21	2	.....	1	21
Ontonagon	4	27	95	85	75	2	4	10	6	6	1	.....	.....	2	29
Osceola	5	141	90	80	75	1	1	75	54	23	19	63	.....	1	104
Oscoda	4	7	.....	.....	70	.....	.....	7	5	2	2	1	.....	.....	12
Otsego	4	36	90	80	65	1	.....	23	5	2	8	4	1	2	33
Ottawa	7	198	90	85	75	5	8	162	56	38	29	38	1	1	224
Presque Isle	2	6	85	65	55	.....	3	2	19	4	1	.....	.....	1	22
Roscommon	3	8	90	80	75	.....	1	7	6	3	2	5	.....	.....	8
Saginaw	8	185	85	75	65	3	4	167	69	30	30	40	.....	2	183
St. Clair	8	313	90	80	70	6	15	176	44	30	20	80	.....	2	208
St. Joseph	8	288	95	85	75	7	9	162	61	.....	15	69	.....	10	249
Sanilac	7	190	90	85	75	4	28	108	35	25	30	60	3	1	185
Schoolcraft	4	7	.....	.....	.....	1	.....	6	6	1	.....	1	.....	.....	6
Shiawassee	7	312	95	85	75	3	4	161	64	41	45	52	2	2	253
Tuscola	7	225	95	90	80	5	16	135	66	16	1	53	.....	3	154
Van Buren	8	405	90	80	70	6	30	246	51	44	29	69	.....	.....	305
Washtenaw	9	.....	90	85	75	1	10	191	74	97	49	53	.....	16	281
Wayne	12	276	90	80	75	9	25	194	40	64	33	73	1	8	237
Wexford	4	86	75	75	75	3	5	52	24	18	13	43	.....	.....	67
Totals	445	11,382	90.3	81.3	72.2	174	638	7,662	3,106	2,011	1,995	3,490	32	181	10,255

a Including two regular examinations and all special public examinations in each county.

TABLE XIII.

Miscellaneous Statistics, as reported by Secretaries of County Boards of Examiners for the Year ending September 4, 1882.

Counties.	No. of Meetings of Co. Teachers' Associations.	No. of Township Teachers' Meetings.	No. of visits to Schools by Secs. at request of Township Chairmen.	No. of Voluntary visits to Schools by Secretaries.	No. of visits by other Examiners.	Total Amount of per diem received by the Examiners.	Total Amount received by Secretaries for services as Secretaries.	Total Amount receiv'd by Secretaries from Applicants for Special Certificates.	Amounts Allowed by Boards of Supervisors for Stationery, Printing, Postage, etc.	Total Amount of Institute fees Collected.
Alcona	.....	.....	2	2	.....	$48 00	$36 00	$5 00	$5 00	$12 00
Allegan	.....	4	.....	.....	.....	216 00	370 00	85 00	.....	200 50
Alpena	.....	.....	.....	1	.....	72 00	18 00	6 00	10 00	8 50
Antrim	.....	.....	.....	.....	.....	168 00	116 00	23 00	.....	40 00
Baraga	.....	.....	.....	.....	.....	12 00	16 00	8 00	.....	15 00
Barry	2	.....	3	6	25	192 00	294 00	44 00	.....	157 00
Bay	3	.....	.....	5	.....	144 60	128 00	22 00	24 00	53 00
Benzie	.....	.....	.....	8	8	92 00	64 00	16 00	2 38	35 50
Berrien	.....	22	1	12	.....	152 00	298 00	28 00	.....	172 50
Branch	.....	.....	.....	25	.....	192 00	264 00	35 00	3 50	162 00

TABLE XIII.—*Continued.*

Counties.	No. of Meetings of Co. Teachers' Associations.	No. of Township Teachers' Meetings.	No. of visits to Schools by Secs. at request of Township Chairmen.	No. of Voluntary visits to Schools by Secretaries.	No. of visits by other Examiners.	Total Amount of per diem received by the Examiners.	Total Amount received by Secretaries for services as Secretaries.	Total Amount receiv'd by Secretaries from Applicants for Special Certificates.	Amounts Allowed by Boards of Supervisors for Stationery, Printing, Postage, etc.	Total Amount of Institute fees Collected.
Calhoun	------	------	------	3	------	$204 00	$334 00	$59 00	$35 92	$188 00
Cass	------	------	3	25	------	180 00	236 00	28 00	58 14	110 00
Charlevoix	------	------	1	------	------	116 00	116 00	27 75	----------	49 50
Cheboygan	1	------	------	5	5	107 00	70 00	25 00	----------	27 50
Chippewa	------	------	------	------	------	180 00	40 00	8 00	----------	9 00
Clare	------	------	1	4	2	133 00	63 00	21 50	----------	20 50
Clinton	3	4	2	15	25	192 00	300 00	40 00	7 20	114 50
Crawford	------	------	------	3	------	118 00	44 50	12 50	3 06	20 50
Delta	------	------	------	------	------	116 00	38 00	8 00	----------	26 50
Eaton	------	------	2	------	6	108 00	294 00	43 00	----------	172 50
Emmet	1	------	------	30	------	88 00	100 00	20 00	29 37	37 50
Genesee	3	------	1	9	12	504 00	322 00	42 00	56 50	128 50
Gladwin	------	------	------	------	------	70 00	29 00	9 00	1 50	12 00
Gr'd Traverse	------	------	------	------	------	144 00	114 00	21 00	----------	37 00
Gratiot	2	------	1	------	------	180 00	132 00	63 00	----------	113 50
Hillsdale	3	8	4	6	10	248 00	350 00	84 00	14 00	205 50
Houghton	------	------	1	4	8	132 00	38 00	5 00	117 38	46 00
Huron	2	------	1	11	------	216 00	190 00	18 00	10 00	62 00
Ingham	8	------	------	27	------	192 00	264 00	55 00	8 00	136 00
Ionia	3	2	2	1	------	158 00	288 00	10 50	24 00	171 50
Iosco	------	------	------	5	------	12 00	40 00	5 00	2 65	20 00
Isabella	1	5	2	5	5	164 00	168 00	50 00	1 50	68 00
Isle Royal	------	------	------	------	------	----------	----------	----------	----------	----------
Jackson	------	------	------	15	6	204 00	314 00	74 00	15 00	167 50
Kalamazoo	2	------	------	------	10	240 00	280 00	76 00	----------	164 50
Kalkaska	2	------	------	2	4	144 00	90 00	19 00	2 90	32 50
Kent	2	------	------	8	10	348 00	414 00	119 00	125 00	237 50
Keweenaw	------	------	------	5	------	80 00	22 00	7 00	2 50	9 50
Lake	------	------	------	3	------	122 00	89 00	----------	2 50	24 50
Lapeer	4	------	------	8	------	192 00	266 00	30 00	10 72	145 50
Leelanaw	------	------	------	6	------	144 00	100 00	19 00	7 00	35 50
Lenawee	1	------	2	18	12	216 00	398 00	40 00	----------	191 50
Livingston	1	------	3	2	12	224 00	264 00	24 00	20 00	119 00
Mackinac	------	------	------	3	------	116 00	30 00	12 00	5 00	14 50
Macomb	2	------	1	20	------	164 00	229 00	4 00	30 01	103 50
Manistee	10	26	1	40	1	282 00	96 00	17 00	55 20	33 00
Manitou	------	------	------	1	------	12 00	12 00	2 00	----------	5 00
Marquette	------	------	------	3	------	144 00	64 00	10 00	----------	39 50
Mason	------	------	------	4	------	108 00	96 00	5 50	20 00	38 00
Mecosta	4	10	1	25	------	84 00	160 00	27 00	70 00	59 50
Menominee	------	------	28	------	------	56 00	33 00	33 50	----------	23 00
Midland	------	------	------	------	------	148 00	94 00	13 50	4 00	38 00
Missaukee	------	------	3	12	------	12 00	88 00	12 00	5 00	17 50
Monroe	3	------	1	4	------	192 00	276 00	34 00	----------	134 00
Montcalm	2	1	3	------	------	192 00	262 00	143 00	----------	86 50
Montmorency	------	------	------	1	------	132 00	22 00	3 00	2 75	4 50
Muskegon	------	------	------	------	------	----------	----------	----------	----------	----------
Newaygo	1	------	------	5	20	168 00	186 00	58 00	18 50	75 50
Oakland	5	1	2	5	------	252 00	436 00	85 00	----------	223 00
Oceana	6	3	1	1	------	168 00	164 00	33 00	36 00	68 50
Ogemaw	------	------	------	10	7	100 00	56 00	11 00	----------	19 50
Ontonagon	------	------	------	------	------	128 00	20 00	3 00	2 25	9 50
Osceola	3	------	1	11	4	156 00	144 00	47 50	10 00	59 50
Oscoda	------	------	------	4	------	50 00	32 00	5 00	15 10	6 00
Otsego	------	------	------	------	3	106 00	68 00	3 00	5 00	16 50

TABLE XIII.—*Continued.*

Counties.	No. of Meetings of Co. Teachers' Associations.	No. of Township Teachers' Meetings.	No. of visits to Schools by Secs. at request of Township Chairmen.	No. of Voluntary visits to Schools by Secretaries.	No. of visits by other Examiners.	Total Amount of per diem received by the Examiners.	Total Amount received by Secretaries for services as Secretaries.	Total Amount receiv'd by Secretaries from Applicants for Special Certificates.	Amounts Allowed by Boards of Supervisors for Stationery, Printing, Postage, etc.	Total Amount of Institute fees Collected.
Ottawa	------	------	2	90	------	$170 00	$234 00	$39 50	----------	$128 00
Presque Isle	------	------	------	------	12	90 00	40 00	19 00	----------	14 00
Roscommon	------	------	------	3	3	132 00	20 00	6 00	----------	6 50
Saginaw	2	------	2	------	------	170 00	280 00	68 00	----------	120 00
St. Clair	1	2	2	6	------	192 00	300 00	44 00	----------	130 50
St. Joseph	------	7	------	5	------	160 00	252 00	35 00	----------	149 50
Sanilac	3	------	------	------	------	180 00	246 00	10 00	----------	97 00
Schoolcraft	------	------	------	------	------	50 00	18 00	1 00	$1 38	5 50
Shiawassee	3	------	6	8	------	143 00	240 00	43 50	17 09	133 50
Tuscola	1	3	1	18	10	155 00	258 00	66 00	----------	118 50
Van Buren	------	------	------	------	16	192 00	300 00	51 00	----------	167 00
Washtenaw	------	------	------	------	------	204 00	332 00	70 00	30 00	167 00
Wayne	2	------	1	3	5	516 00	312 00	30 00	30 00	129 50
Wexford	1	------	------	6	------	132 00	116 00	24 00	20 00	43 50
Totals	93	98	88	567	241	$12,023 00	$12,927 50	$2,405 25	$977 00	$6,253 00

TABLE XIV.

Graded School Statistics, Compiled from School Inspectors' Reports for the Year ending September 4, 1882.

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers. Men.	Av. Monthly Wages of Teachers. Women.	Total Expenditures.	Total Indebtedness.
Ada	Kent	115	$5,000 00	$558 00	------	31 00	$1,527 00	$3,000 00
Addison	Lenawee	113	2,300 00	666 00	$50 00	24 00	1,171 37	
Adrian	Lenawee	2,685	104,000 00	13,894 50	120 33	33 58	28,556 18	3,600 00
Alaska	Kent	111	2,000 00	509 00	45 00	16 00	701 28	800 00
Albion	Calhoun	813	45,000 00	4,729 00	115 89	31 83	9,634 10	10,400 00
Algonac	St. Clair	355	8,000 00	1,350 00	70 00	26 62	1,668 56	
Allegan	Allegan	748	22,000 00	4,050 00	80 00	32 50	6,725 31	
Allen	Hillsdale	120	10,000 00	585 00	45 77	25 00	2,631 05	5,000 00
Alleyton & W. Cloud	Newaygo	136	2,600 00	400 00	40 00	------	565 52	
Allouez	Keweenaw	350	1,200 00	1,550 00	75 00	40 00	1,987 51	
Alma	Gratiot	262	5,000 00	1,276 00	49 69	24 70	2,732 05	3,000 00
Almont	Lapeer	290	1,000 00	1,700 00	41 45	32 49	3,987 67	
Alpena	Alpena	1,627	28,000 00	7,600 00	85 00	45 38	14,480 72	
Alpena Tp. No. 1	Alpena	325	2,000 00	1,080 00	30 00	30 00	2,203 20	4,011 20
Ann Arbor	Washtenaw	2,721	144,000 00	20,104 25	105 99	38 75	32,898 96	13,000 00
Armada	Macomb	204	6,000 00	1,369 75	61 76	26 74	1,541 37	
Athens	Calhoun	132	3,000 00	274 00	65 00	30 00	571 84	
Atlantic Mine	Houghton	256	2,000 00	1,478 95	66 00	36 00	2,271 96	
Attica	Lapeer	265	1,600 00	723 00	39 33	20 50	1,121 12	
Augusta	Kalamazoo	215	1,000 00	1,260 00	95 00	45 00	1,646 34	
Au Sable	Iosco	448	3,500 00	1,560 00	80 00	40 00	2,242 44	2,500 00
Baldwin City	Lake	135	2,500 00	280 00	40 00	30 00	1,712 94	2,500 00
Bancroft	Shiawassee	169	2,000 00	829 00	53 03	35 18	1,466 91	432 60
Bangor Tp. No 2, fl	Van Buren	268	2,600 00	1,456 00	77 78	28 00	2,015 55	
Bangor Tp. No. 3, fl	Van Buren	129	2,000 00	540 00	40 00	20 00	678 00	

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers. Men.	Av. Monthly Wages of Teachers. Women.	Total Expenditures.	Total Indebtedness.
.....	Clinton.....	126	$4,000 00	$663 00	$46 87	$25 71	$1,304 57	$1,200 00
Creek.....	Calhoun.....	2,232	150,000 00	11,693 97	94 66	32 79	29,342 87	65,000 00
ity.....	Bay	6,318	145,000 00	19,958 75	120 00	35 12	54,391 94	10,000 00
n.....	Marquette..	541	2,500 00	2,800 00	100 00	60 00	3,443 60	
g.....	Ionia	209	6,000 00	1,143 75	61 84	27 83	2,877 01	3,000 00
ille.....	Wayne	192	6,000 00	1,000 00	60 00	20 00	1,755 46	
ue.....	Eaton	254	.....	1,170 00	50 00	26 67	1,540 66	6,431 00
n Harbor....	Berrien	563	20,000 00	2,910 00	88 89	33 50	4,089 73	
n Tp. No. 2..	Cheboygan..	173	.....	500 00	50 60	.....	626 38	
.....	Ottawa	150	600 00	535 00	40 00	24 58	596 90	
n Springs....	Berrien	270	5,500 00	1,620 00	80 00	100 00	2,427 70	
pids.....	Mecosta.....	1,039	30,000 00	6,561 25	130 00	33 55	21,171 92	6,000 00
gham.....	Oakland.....	274	15,000 00	2,080 00	80 00	25 60	2,858 94	
eld, No. 1, fl.	Lenawee....	222	6,000 00	1,229 50	60 00	21 20	1,844 55	2,400 00
eld, No. 2, fl.	Lenawee....	214	3,500 00	965 00	50 00	26 67	1,542 53	600 00
ingdale.....	Van Buren..	145	4,000 00	583 00	42 25	24 17	2,360 50	3,000 00
on	Muskegon ..	171	1,000 00	806 75	64 68	22 86	1,648 76	
enridge.....	Gratiot.....	109	1,200 00	332 00	.....	23 71	1,260 53	1,221 02
sville	Van Buren..	110	1,200 00	675 00	50 00	37 36	732 79	
sport	Saginaw.....	130	3,500 00	657 00	45 00	28 00	869 86	
on.....	Livingston..	257	15,000 00	2,070 00	100 00	26 75	2,690 03	
way Center.	St. Clair.....	217	2,000 00	670 00	50 00	17 00	741 99	
on.....	Branch	275	40,000 00	1,530 00	80 00	27 00	2,177 30	
lyn	Jackson	175	12,000 00	1,624 00	80 00	30 52	1,963 80	
nan.....	Berrien	614	40,000 00	2,861 00	100 00	35 01	8,124 20	16,000 00
Vista Tp., No.6	Saginaw	202	3,500 00	600 00	40 00	20 00	2,422 48	
gton	Calhoun....	126	3,000 00	636 00	40 00	18 40	700 86	
ak.....	St. Joseph ..	248	15,000 00	1,327 00	70 00	19 36	2,635 00	2,000 00
.....	Shiawassee..	114	5,000 00	1,024 75	52 77	48 25	1,215 59	
ac.....	Wexford....	775	9,000 00	2,848 12	100 00	36 96	4,578 75	1,500 00
nia.....	Kent	175	2,000 00	900 00	60 00	20 00	1,177 33	
rnia.....	Branch	89	1,000 00	409 90	25 58	18 31	445 45	
et	Houghton ..	2,316	600 00	11,537 25	92 20	43 21	37,092 62	
et Tp., No. 2	Houghton ..	355	2,500 00	1,750 00	72 50	30 00	3,200 83	
la Mills....	Hillsdale ...	101	5,000 00	578 50	40 00	24 28	1,158 99	
nsburg.....	Kent	132	1,200 00	540 00	40 00	20 00	571 35	
.....	St. Clair.....	241	10,000 00	1,000 00	50 00	25 00	1,781 33	6,000 00
on	Monroe	189	3,000 00	450 00	.....	25 00	1,174 28	500 00
.....	Tuscola.....	520	4,500 00	2,584 00	90 00	27 38	5,970 63	4,000 00
ton.....	Saginaw	382	2,000 00	1,029 25	58 81	25 00	2,083 00	
n City.....	Montcalm ..	280	3,000 00	1,490 00	65 00	28 00	1,775 79	
ille.....	Huron	275	5,000 00	1,250 00	70 00	55 00	1,489 84	
ity	Tuscola.....	166	1,000 00	652 50	50 00	22 50	843 50	
polis	Cass	238	12,000 00	2,314 00	94 44	35 03	5,376 97	6,083 64
Lake.....	Montcalm ..	101	4,000 00	282 00	.....	29 06	439 27	
Springs	Kent	353	20,000 00	2,080 00	80 00	32 24	4,619 11	10,000 00
al Mine.....	Keweenaw ..	330	8,500 00	1,720 00	111 12	40 00	2,513 82	
r Line	Macomb	249	1,200 00	490 00	45 00	20 00	578 75	
rville.....	St. Joseph..	282	20,000 00	2,050 00	80 00	31 25	4,786 85	5,500 00
o.....	Calhoun	94	1,200 00	465 00	26 67	25 00	660 73	
voix	Charlevoix .	258	5,500 00	1,125 00	65 00	30 00	1,505 02	
tte.....	Eaton	817	25,000 00	6,750 00	.....	45 00	8,650 65	4,000 00
.....	Lake	273	2,800 00	626 25	50 00	23 23	2,292 98	1,400 00
ygan	Cheboygan .	638	12,000 00	1,970 00	75 00	32 50	3,812 80	10,700 00
a.....	Washtenaw.	388	10,000 00	2,320 00	80 00	25 34	3,668 15	
ning.....	Saginaw	340	12,000 00	1,620 80	70 00	27 29	2,885 78	7,000 00
ming Tp., No.3	Berrien	129	350 00	280 00	.....	35 00	350 65	
.....	Clare.....	211	2,800 00	978 05	38 13	32 50	1,577 99	
ton.....	Oakland	166	3,500 00	929 00	50 00	26 00	2,042 60	1,500 00
n.....	Lenawee ...	136	5,000 00	762 50	50 00	20 45	943 54	
n.....	Keweenaw ..	127	1,600 00	1,195 00	90 00	32 78	1,439 57	
k.....	Kalamazoo..	114	1,000 00	525 00	35 00	26 25	624 25	
n	Lenawee ...	256	6,000 00	1,875 00	86 11	29 89	2,465 05	
.....	Genesee	186	500 00	495 00	35 00	20 00	735 22	
ater.....	Branch	1,215	50,000 00	9,284 40	83 33	38 87	11,793 68	

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers.		Total Expenditures.	Total Indebtedness.
					Men.	Women.		
Coloma	Berrien	164	$800 00	$364 40	$27 48	$24 60	$458 06	
Colon	St. Joseph	170	3,300 00	1,080 00	60 00	24 00	3,785 00	$2,000 00
Commerce	Oakland	60	500 00	300 00	.....	37 50	338 07	
Concord	Jackson	189	2,000 00	1,590 00	75 00	28 00	1,946 00	
Constantine	St. Joseph	413	35,000 00	3,360 00	60 00	31 20	5,612 38	
Coopersville	Ottawa	236	5,000 00	860 00	60 00	20 00	1,188 64	
Coral	Montcalm	197	2,500 00	616 00	45 11	23 33	1,144 30	
Corunna	Shiawassee	482	28,500 00	3,180 00	75 00	28 00	21,289 03	12,000 00
Covert	Van Buren	154	1,800 00	608 00	.....	33 74	778 93	
Croswell	Sanilac	214	800 00	573 75	50 83	18 48	686 54	
Crystal Falls	Marquette	210	.....	.....	.....	.....	.....	
Dansville	Ingham	168	4,000 00	1,419 50	61 86	27 97	1,658 84	
Davisburg	Oakland	89	1,500 00	505 20	42 83	22 00	604 23	
Dearborn	Wayne	306	2,500 00	795 00	58 33	30 00	980 20	
Decatur	Van Buren	447	10,000 00	2,594 00	89 47	30 77	3,087 11	
Deckerville	Sanilac	258	600 00	175 00	36 00	.....	219 86	
Deerfield	Lenawee	308	6,000 00	1,348 00	77 78	24 00	2,405 49	
Delaware Mine	Keweenaw	243	100 00	1,125 00	.....	62 50	1,635 37	
Detroit	Wayne	40,210	778,291 00	160,546 66	133 08	41 08	280,019 12	
De Witt	Clinton	123	10,000 00	741 40	49 44	25 77	1,007 60	
Dexter	Washtenaw	375	8,000 00	2,626 00	69 30	24 80	3,272 68	
Dimondale	Eaton	127	2,000 00	442 00	33 14	26 04	1,127 19	
Douglas	Allegan	188	5,000 00	1,240 00	55 11	30 00	1,682 65	
Dowagiac	Cass	558	1,800 00	3,485 45	56 02	31 25	5,244 26	1,031 42
Drenthe	Ottawa	156	600 00	680 00	50 00	18 00	872 15	
Dryden	Lapeer	158	4,000 00	668 87	46 18	12 18	793 29	
Dundee	Monroe	377	2,000 00	1,400 00	70 00	23 33	1,520 02	
East Saginaw	Saginaw	7,040	200,000 00	30,929 50	101 42	43 32	58,174 87	
East Tawas	Iosco	331	3,000 00	2,030 00	95 00	36 00	9,070 96	4,500 00
Eaton Rapids	Eaton	507	32,000 00	2,873 00	85 00	28 94	7,924 78	2,200 00
Ecorse	Wayne	190	3,900 00	574 75	42 50	21 36	803 67	
Edmore	Montcalm	309	1,500 00	1,300 00	50 00	28 57	2,798 99	1,250 00
Edwardsburg	Cass	186	4,000 00	1,035 00	55 00	30 00	1,412 16	
Elk Rapids	Antrim	318	15,000 00	2,573 50	62 25	42 37	3,829 52	
Elm Hall	Gratiot	138	800 00	583 00	42 77	22 00	802 32	
Elsie	Clinton	179	1,000 00	630 00	.....	27 39	724 50	
Erie	Monroe	169	1,500 00	757 00	39 87	25 00	969 38	
Escanaba	Delta	833	15,000 00	4,400 00	100 00	37 78	5,898 13	25,000 00
Essexville	Bay	342	7,000 00	1,300 00	60 00	35 00	3,366 70	2,000 00
Evart	Osceola	365	5,500 00	2,018 00	65 00	36 00	4,123 03	1,000 00
Fairfield	Lenawee	94	2,500 00	364 00	35 00	18 67	828 23	1,400 00
Fair Haven	St. Clair	289	1,200 00	394 00	35 81	.....	465 25	
Farmers	Sanilac	119	600 00	245 00	55 00	.....	298 03	
Farmington	Oakland	160	600 00	825 00	50 00	32 50	976 23	22 81
Farwell	Clare	193	3,500 00	990 00	36 67	.....	1,157 78	
Fenton	Genesee	789	2,500 00	4,820 00	75 00	36 89	6,944 38	
Ferrysburg	Ottawa	266	2,200 00	1,078 75	60 00	24 48	1,342 37	
Fillmore Center	Allegan	180	1,000 00	400 00	.....	50 00	641 47	
Fillmore Tp., No. 1	Allegan	168	2,000 00	456 00	35 00	22 00	625 91	
Fillmore Tp., No. 4	Allegan	159	1,200 00	250 00	.....	25 00	298 05	
Flat Rock	Wayne	208	14,000 00	1,080 00	60 00	24 00	1,545 79	
Flint	Genesee	2,443	127,000 00	14,954 50	89 33	37 48	30,244 28	78,000 00
Flushing	Genesee	240	10,000 00	2,000 00	80 00	30 00	2,249 73	
Forester	Sanilac	160	1,034 00	264 00	37 71	.....	330 25	
Forestville	Sanilac	208	2,000 00	675 00	61 67	20 00	780 33	
Fort Gratiot	St. Clair	534	7,000 00	2,125 00	72 50	35 00	3,749 78	200 00
Fowler	Clinton	115	1,800 00	652 00	48 33	24 11	875 28	
Fowlerville	Livingston	300	2,500 00	1,820 00	70 00	28 00	2,833 50	
Frankfort	Benzie	340	2,000 00	1,690 00	73 00	32 00	2,108 32	
Franklin Tp., No. 1	Houghton	350	800 00	1,580 00	73 00	42 00	1,896 93	
Franklin Tp., No. 2	Houghton	242	3,000 00	1,575 00	65 00	46 25	2,610 00	
Franklin Tp., No. 5	Houghton	379	1,500 00	1,615 00	75 00	43 25	2,144 08	
Freeland	Saginaw	120	2,000 00	640 00	40 00	24 00	766 14	
Freeport	Barry	101	1,500 00	340 00	30 00	20 00	812 21	
Fremont Center	Newaygo	341	7,000 00	1,386 00	65 00	30 66	2,188 07	3,000 00

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers.		Total Expenditures.	Total Indebtedness.
					Men.	Women.		
Fulton	Kalamazoo	91	$2,600 00	$282 50	$35 00	$23 75	$762 37	$1,275 00
Gaines' Station	Genesee	163	500 00	650 00	45 00	24 00	735 56	
Galesburg	Kalamazoo	216	1,200 00	1,444 40	52 16	27 94	1,751 53	
Galien	Berrien	187	5,000 00	875 00	55 00	23 21	1,618 01	440 00
Ganges	Allegan	100	2,300 00	400 00	.....	30 76	807 75	
Gaylord	Otsego	192	1,200 00	700 77	50 33	30 20	1,314 69	680 00
Gibralter	Wayne	93	3,500 00	236 12	.....	27 78	381 86	
Girard	Branch	84	1,000 00	465 00	31 67	20 00	624 88	
Gobleville	Van Buren	158	2,500 00	709 50	45 52	20 22	921 45	
Goodrich	Genesee	64	2,400 00	630 00	50 00	20 00	695 15	
Graafschap	Allegan	239	640 00	515 00	.....	29 76	630 36	
Grand Blanc	Genesee	100	1,000 00	667 00	45 00	37 42	743 41	
Grand Haven	Ottawa	1,801	55,000 00	8,050 00	77 39	35 62	25,046 53	8,500 00
Grand Ledge	Eaton	391	3,000 00	1,852 50	60 76	25 00	2,429 08	
Grand Rapids	Kent	11,298	437,500 00	57,872 64	112 00	42 35	101,109 94	72,000 00
Grand Rapids Tp., No. 1	Kent	334	6,000 00	1,240 00	70 00	27 00	1,822 61	4,500 00
Grand Rapids Tp., No. 6	Kent	192	2,774 00	543 25	.....	29 05	1,021 30	
Grandville	Kent	335	10,000 00	1,907 20	63 20	28 98	2,529 61	
Grass Lake	Jackson	240	8,000 00	1,657 00	85 05	25 60	2,253 46	
Grattan	Kent	109	2,000 00	384 50	48 90	20 00	512 50	
Greenland Tp., No. 1	Ontonagon	107	1,000 00	1,050 00	75 00	30 00	1,291 93	
Greenland Tp., No. 2	Ontonagon	132	.....	1,050 00	75 00	30 00	1,431 02	
Greenland Tp., No. 2, fl	Ontonagon	91	785 00	1,000 00	75 00	25 00	1,707 02	450 00
Greenville	Montcalm	841	45,000 00	6,722 00	87 50	38 24	12,493 32	6,500 00
Grindstone City	Huron	208	1,400 00	690 00	50 00	19 00	1,511 40	540 00
Grosse Isle	Wayne	242	3,000 00	942 50	42 50	22 50	1,188 35	
Hadley	Lapeer	129	2,000 00	954 00	80 00	26 00	1,046 13	
Hamtramck Tp., No. 5	Wayne	662	5,000 00	1,290 00	70 00	32 77	1,899 89	
Hancock	Houghton	1,079	25,000 00	5,373 75	107 50	46 25	9,738 87	15,000 00
Hanover	Jackson	154	8,000 00	1,550 00	60 00	31 67	1,883 87	
Harbor Springs	Emmet	342	6,000 00	1,057 50	50 00	28 93	1,677 60	5,600 00
Harrison	Clare	147	3,500 00	517 50	48 92	25 00	1,614 02	1,000 00
Harrisville	Alcona	240	6,500 00	1,370 00	70 00	40 50	1,748 24	
Hart	Oceana	215	3,000 00	1,260 00	70 00	28 00	1,628 25	
Hartford	Van Buren	295	5,500 00	1,492 00	60 00	28 59	1,729 37	
Hartland	Livingston	103	3,000 00	528 00	40 00	16 00	647 51	
Hastings	Barry	769	45,000 00	3,572 63	114 94	27 66	20,628 76	23,000 00
Hersey	Osceola	171	2,000 00	1,200 00	65 00	27 50	1,481 23	
Hesperia	Newaygo	184	4,000 00	626 25	64 03	26 70	1,853 68	2,250 00
Highland Station	Oakland	131	1,800 00	434 00	40 00	22 00	1,185 20	400 00
Hillsdale	Hillsdale	876	50,000 00	4,825 00	105 26	33 55	7,756 57	
Holland	Ottawa	992	20,000 00	3,125 00	70 00	24 25	5,891 76	13,000 00
Holland Tp., No. 1	Ottawa	144	1,200 00	275 00	.....	27 50	350 75	
Holland Tp., No. 9	Ottawa	135	1,200 00	235 00	27 50	25 00	1,283 73	843 50
Holly	Oakland	403	25,000 00	2,600 00	100 00	26 67	4,012 00	2,500 00
Holt	Ingham	132	2,400 00	476 00	32 33	20 00	575 81	
Homer	Calhoun	273	7,500 00	1,730 00	65 00	30 00	2,270 99	
Horton	Jackson	94	3,000 00	684 00	50 00	26 00	837 79	
Houghton	Houghton	1,121	37,000 00	7,599 00	112 50	48 05	11,764 25	
Howard City	Montcalm	222	2,000 00	1,350 00	70 00	32 50	1,939 07	260 69
Howell	Livingston	640	25,000 00	4,030 00	100 00	33 66	7,413 57	13,000 00
Hubbardston	Ionia	186	5,000 00	1,080 00	45 00	31 50	2,172 23	4,500 00
Hudson	Lenawee	414	10,000 00	3,242 00	105 26	33 71	4,434 74	
Hudson Tp., No. 5	Lenawee	234	5,000 00	1,158 00	66 67	31 00	1,501 69	
Humboldt	Marquette	180	2,500 00	1,150 00	75 00	40 00	2,123 67	
Ida	Monroe	127	1,500 00	436 00	40 00	23 60	486 82	
Imlay City	Lapeer	339	3,000 00	1,550 00	75 00	26 67	2,209 57	500 00
Inverness Tp., No. 3, fl	Cheboygan	217	2,000 00	862 50	59 25	30 00	1,012 15	
Ionia	Ionia	1,178	30,000 00	7,480 00	70 00	38 00	12,084 16	5,500 00
Ishpeming	Marquette	1,774	37,000 00	7,740 00	180 00	43 68	13,560 83	
Ithaca	Gratiot	323	6,600 00	1,800 00	100 00	26 67	2,246 74	
Jackson, No. 1	Jackson	2,606	110,000 00	19,740 99	140 00	42 85	34,610 65	8,000 00
Jackson, No. 17	Jackson	2,111	50,000 00	7,780 82	120 00	34 96	10,697 73	
Jonesville	Hillsdale	579	40,000 00	2,975 70	78 00	28 31	4,570 38	
Kalamazoo	Kalamazoo	3,488	120,000 00	44,951 50	93 33	44 89	69,066 17	25,000 00

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers.		Total Expenditures.	Total Indebtedness.
					Men.	Women.		
Kalkaska	Kalkaska	216	$3,500 00	$786 25	------	$27 58	$1,923 55	
Keelersville	Van Buren	88	2,000 00	275 00	------	20 68	413 30	
Laingsburg	Shiawassee	176	1,000 00	1,140 00	$50 00	32 00	1,431 96	
Lake Linden	Houghton	762	50,000 00	6,062 50	120 00	50 28	11,433 97	
Lakeside Tp., No. 3	Muskegon	325	2,000 00	1,146 25	55 39	33 55	1,336 63	
Laketon Tp., No. 1 fl	Allegan	145	700 00	392 75	55 00	21 29	864 81	
Lakeview	Montcalm	259	3,000 00	1,400 00	55 00	28 33	2,205 94	
Lamont	Ottawa	103	3,000 00	525 00	40 33	18 00	822 29	
L'Anse	Baraga	307	2,000 00	1,800 00	80 00	40 00	2,219 49	
Lansing	Ingham	2,387	110,000 00	12,650 01	128 71	38 11	22,726 25	$51,000 00
Lapeer	Lapeer	763	35,000 00	5,600 00	90 00	29 23	6,963 94	
Lawrence	Van Buren	151	10,000 00	1,320 00	66 67	20 00	1,543 44	
Lawton	Van Buren	272	5,000 00	1,419 40	78 94	20 55	1,782 74	
Leland	Leelanaw	147	1,000 00	----------	50 00	21 87	----------	660 33
Leslie	Ingham	407	18,000 00	2,115 00	80 00	27 00	2,694 91	
Lexington	Sanilac	354	3,000 00	1,670 00	70 00	24 25	1,950 02	
Linden	Genesee	184	1,000 00	1,050 00	55 00	25 00	1,153 64	
Lisbon	Ottawa	109	2,500 00	737 50	50 25	25 00	1,088 29	
Litchfield	Hillsdale	246	1,500 00	1,204 25	77 66	27 58	1,462 86	
Lowell	Kent	672	10,000 00	3,202 00	59 06	29 00	5,058 96	1,000 00
Ludington	Mason	1,226	20,000 00	6,208 75	72 50	43 26	11,047 31	7,000 00
Lyons	Ionia	219	4,000 00	1,162 00	92 00	30 36	1,521 18	
McBrides	Montcalm	251	1,000 00	537 00	35 00	28 80	1,184 55	
Mackinac	Mackinac	252	2,000 00	1,048 33	75 00	15 20	1,383 78	
Macon	Lenawee	114	2,000 00	495 00	35 00	20 00	632 86	
Mancelona	Antrim	136	400 00	506 00	------	27 00	850 81	3,542 00
Manchester	Washtenaw	406	25,000 00	3,090 00	72 50	32 80	3,830 54	
Manistee	Manistee	2,571	50,000 00	9,674 50	98 50	45 32	21,664 56	12,000 00
Manistee Tp., No. 1	Manistee	212	3,600 00	451 50	------	32 51	2,334 73	2,600 00
Manistique	Schoolcraft	179	3,791 00	1,075 00	------	54 57	5,240 12	
Manton	Wexford	107	1,250 00	415 00	------	46 11	761 72	
Maple Rapids	Clinton	242	2,600 00	1,179 00	75 00	56 00	1,553 60	
Marcellus	Cass	198	7,000 00	692 50	45 94	19 24	2,319 65	5,400 00
Marine City	St. Clair	690	10,000 00	1,825 00	77 78	31 25	4,350 86	
Marlette	Sanilac	293	5,450 00	925 00	47 50	22 50	1,884 39	
Marquette	Marquette	1,875	75,000 00	7,787 50	165 00	40 91	14,799 80	50,000 00
Marshall	Calhoun	1,161	100,000 00	7,368 35	140 00	33 15	15,674 07	220 00
Marysville	St. Clair	136	2,500 00	540 00	40 00	20 00	664 71	
Mason	Ingham	590	18,000 00	3,063 75	92 78	30 05	5,376 00	
Mattawan	Van Buren	88	3,000 00	387 50	35 00	21 25	771 40	
Mears	Oceana	161	1,200 00	345 00	35 00	25 00	930 00	75 00
Mecosta	Mecosta	172	2,100 00	356 50	49 06	35 74	1,285 59	550 00
Memphis	Macomb	292	5,000 00	1,080 00	60 00	24 00	1,293 22	
Mendon	St. Joseph	292	12,000 00	1,760 00	60 00	29 00	3,151 04	4,400 00
Menominee	Menominee	930	27,000 00	4,190 00	70 00	40 03	13,409 44	9,000 00
Metamora	Lapeer	119	3,500 00	735 00	50 00	23 75	981 39	
Michigamme	Marquette	411	6,500 00	1,250 00	96 42	41 07	3,764 99	1,000 00
Middleville	Barry	257	15,000 00	1,203 52	60 34	25 13	5,111 58	12,000 00
Midland, No. 3	Midland	475	20,000 00	2,506 25	100 00	32 00	6,628 76	8,000 00
Midland, No. 6	Midland	130	2,000 00	666 00	50 00	24 00	904 33	
Milford	Oakland	401	8,000 00	1,967 00	51 64	28 40	6,780 59	1,654 96
Millington	Tuscola	214	700 00	665 83	35 60	------	640 33	
Monroe	Monroe	1,796	15,800 00	3,243 75	105 26	29 19	4,629 00	
Montague	Muskegon	479	15,000 00	2,400 00	100 00	35 00	5,944 11	7,000 00
Morenci	Lenawee	381	15,000 00	1,652 00	55 56	21 33	4,011 72	4,800 00
Morley	Mecosta	135	1,000 00	765 00	50 00	35 00	898 39	
Morrice	Shiawassee	130	400 00	463 00	------	25 72	519 94	
Moscow	Hillsdale	104	1,200 00	445 00	39 33	14 28	565 06	
Moscow Tp., No. 1 fl	Hillsdale	96	1,000 00	262 00	30 00	15 77	456 71	
Mosherville	Hillsdale	71	3,000 00	300 00	33 33	------	308 15	
Mount Clemens	Macomb	976	23,000 00	3,280 00	120 00	29 71	4,442 88	
Mount Morris	Genesee	222	1,000 00	608 00	43 55	24 00	781 99	
Mount Pleasant	Isabella	419	16,000 00	1,892 00	70 00	35 06	17,767 60	13,934 00
Muir	Ionia	216	900 00	1,159 50	66 67	62 06	1,256 47	
Muskegon	Muskegon	4,387	82,043 00	17,664 75	88 00	41 35	36,030 31	17,500 00

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers. Men.	Av. Monthly Wages of Teachers. Women.	Total Expenditures.	Total Indebtedness.
Napoleon	Jackson	156	$5,000 00	$1,200 00	$46 00	$28 00	$1,460 27	
Nashville	Barry	294	1,500 00	1,400 00	60 00	26 67	1,632 58	
National Mine	Marquette	340	5,000 00	1,575 00	90 00	45 00	5,085 77	$3,000 00
Negaunee	Marquette	1,604	16,000 00	6,700 00	125 00	42 27	10,930 65	
Newaygo	Newaygo	195	6,000 00	1,836 00	100 00	27 86	2,614 17	
New Baltimore	Macomb	354	24,000 00	1,302 00	66 67	26 00	1,658 83	
New Buffalo	Berrien	220	3,000 00	1,072 50	55 56	31 80	1,352 55	
New Groningen	Ottawa	158	1,800 00	472 00	40 00	18 00	1,462 69	1,330 00
New Haven	Macomb	213	1,500 00	963 00	60 00	46 77	1,200 25	42 62
New Holland	Ottawa	202	1,000 00	633 00	52 50	12 00	970 98	175 00
New Hudson	Oakland	75	7,000 00	540 00	40 00	30 00	667 53	
New Troy	Berrien	154	6,000 00	600 00	50 00	25 00	745 06	
Niles	Berrien	1,310	50,000 00	7,748 50	83 89	33 38	11,606 17	
North Adams	Hillsdale	188	7,000 00	1,240 80	70 09	29 86	1,670 60	
North Branch	Lapeer	202	1,500 00	975 00	55 00	24 00	1,264 56	179 78
North Muskegon	Muskegon	321	1,500 00	937 50	70 00	24 48	1,544 80	
Northport	Leelanaw	171	2,000 00	860 00	60 00	27 82	1,079 81	
Northville	Wayne	263	11,000 00	1,840 00	70 00	28 80	3,209 37	
Norway	Menominee	590	6,000 00	2,311 00	80 00	44 71	6,230 88	1,900 00
Nunica	Ottawa	118	2,500 00	650 00	45 00	20 00	750 00	
Okemos	Ingham	128	3,000 00	535 50	38 50	24 54	230 00	
Olivet	Eaton	177	1,000 00	562 00	.....	31 22	713 00	
Onondaga	Ingham	104	500 00	565 00	45 00	20 00	599 73	
Ontonagon	Ontonagon	331	4,000 00	2,255 00	60 00	35 00	2,896 47	
Orange	Ionia	77	800 00	229 00	32 50	15 23	283 58	
Orion	Oakland	173	3,500 00	710 00	45 00	26 00	863 53	
Ortonville	Oakland	121	2,500 00	724 00	49 00	23 40	919 11	274 28
Oscoda	Iosco	617	5,000 00	1,905 00	57 50	31 46	3,856 47	4,000 00
Osseo	Hillsdale	131	3,000 00	409 75	40 00	35 65	728 29	
Otisville	Genesee	189	4,000 00	913 08	44 44	23 16	1,196 58	
Otsego	Allegan	360	8,000 00	2,218 50	93 50	30 60	2,840 54	
Otter Lake	Lapeer	167	1,200 00	464 10	.....	24 42	911 64	413 90
Ovid	Clinton	469	10,000 00	2,181 00	80 00	22 07	3,075 91	
Owosso	Shiawassee	944	50,000 00	5,678 60	54 66	33 65	16,952 55	12,000 00
Oxford	Oakland	300	2,500 00	1,444 00	68 60	26 59	2,541 74	
Palmyra	Lenawee	198	5,000 00	515 00	36 67	26 81	742 21	
Palo	Ionia	123	5,000 00	968 50	50 00	26 33	2,759 55	
Paris Tp. No. 1	Kent	147	1,000 00	520 00	37 78	20 00	582 32	
Parma	Jackson	243	1,400 00	1,636 00	56 00	29 33	2,636 39	5,000 00
Paw Paw	Van Buren	392	38,000 00	3,022 40	78 00	32 03	8,283 46	14,000 00
Pentwater	Oceana	395	8,000 00	2,196 00	80 00	34 90	6,639 35	
Pere Marq. Tp. No. 1	Mason	153	3,600 00	495 00	.....	23 56	1,754 42	335 00
Perry	Shiawassee	132	3,600 00	536 00	50 85	25 55	1,244 10	2,595 00
Petersburg	Monroe	201	8,000 00	805 00	45 00	25 00	1,172 76	
Petoskey	Emmet	719	7,700 00	2,414 50	91 76	17 21	6,978 52	4,500 00
Pewamo	Ionia	109	1,500 00	592 00	40 00	25 20	663 37	
Phœnix	Keweenaw	283	4,000 00	2,000 00	90 00	55 00	2,831 92	
Pierson	Montcalm	157	1,200 00	750 00	45 00	30 00	822 04	
Pinckney	Livingston	185	800 00	725 00	47 50	25 00	816 25	
Pine Run	Genesee	103	1,500 00	450 00	38 75	20 00	560 47	232 00
Pittsford	Hillsdale	111	1,800 00	575 00	44 44	19 44	760 28	
Plainwell	Allegan	477	14,000 00	2,537 60	88 89	27 71	3,160 43	45 00
Plymouth	Wayne	442	6,000 00	2,300 00	77 50	30 50	3,208 67	
Pokagon	Cass	80	600 00	398 00	.....	22 11	666 58	
Pontiac	Oakland	1,204	76,500 00	8,736 00	83 53	30 76	17,720 80	13,690 00
Port Austin	Huron	325	4,500 00	1,286 00	68 60	30 00	1,866 97	
Port Crescent	Huron	168	2,500 00	520 00	.....	26 00	716 09	
Port Hope	Huron	291	2,500 00	850 00	60 00	25 00	1,181 62	
Port Huron	St. Clair	3,300	87,400 00	10,090 00	90 00	33 16	18,178 79	23,000 00
Portland	Ionia	469	16,000 00	2,665 00	84 21	32 72	16,090 74	12,720 00
Port Sanilac	Sanilac	227	500 00	792 00	60 00	28 00	856 93	
Potterville	Eaton	178	4,000 00	544 00	33 33	29 60	694 59	

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers.		Total Expenditures.	Total Indebtedness.
					Men.	Women.		
Quincy	Branch	296	$15,000 00	$2,138 50	$74 85	$30 38	$2,922 99	
Quincy Tp. No. 1	Houghton	527	----------	2,315 00	100 00	45 64	3,210 57	
Ransom	Hillsdale	96	1,200 00	242 40	29 57	18 52	311 96	
Reading	Hillsdale	270	8,000 00	1,386 00	30 00	36 67	4,262 54	
Reed City	Osceola	385	6,000 00	1,810 00	75 00	26 50	2,988 95	$5,100 00
Republic	Marquette	568	5,000 00	2,670 00	132 00	45 00	5,895 34	
Richland	Kalamazoo	106	1,100 00	1,028 00	50 00	52 80	1,192 45	540 00
Richmond	Macomb	211	4,000 00	990 00	60 00	25 00	1,783 32	3,000 00
Riga	Lenawee	241	6,000 00	488 00	39 83	27 67	1,322 62	6,382 00
Riley Centre	St. Clair	108	1,000 00	352 00	------	22 00	448 55	
Rochester	Oakland	286	3,000 00	1,230 00	70 00	26 50	1,558 12	
Rockford	Kent	312	25,000 00	1,650 00	75 00	30 00	4,609 03	12,000 00
Rockland Tp. No. 1	Ontonagon	159	5,000 00	1,400 00	152 64	42 10	2,108 75	
Rockland Tp. No. 3	Ontonagon	186	----------	632 00	------	34 56	891 58	
Rogers City	Presque Isle	126	2,600 00	385 00	38 50	------	816 21	6,000 00
Romeo	Macomb	503	10,000 00	3,800 00	150 00	32 85	4,587 56	
Roscommon	Roscommon	168	2,000 00	582 00	48 00	29 40	1,134 58	950 00
Royal Oak	Oakland	177	4,000 00	390 00	------	26 00	696 46	
Saginaw	Saginaw	3,422	100,000 00	14,988 63	141 66	35 32	26,209 73	4,500 00
St. Charles	Saginaw	246	1,200 00	598 00	40 55	25 27	692 86	
St. Clair	St. Clair	759	22,000 00	4,000 00	90 00	31 00	6,097 62	7,000 00
St. Ignace	Mackinac	170	3,200 00	240 00	40 00	------	2,966 66	2,500 00
St. Johns	Clinton	705	23,000 00	5,264 00	100 00	35 53	10,439 97	5,000 00
St. Joseph	Berrien	1,033	41,500 00	4,360 81	67 50	34 95	16,527 27	27,000 00
St. Louis	Gratiot	795	15,000 00	3,339 60	80 22	32 12	8,318 23	1,500 00
Saline	Washtenaw	267	25,000 00	2,440 00	80 00	32 80	4,196 44	1,000 00
Salt River	Isabella	156	1,800 00	511 00	45 75	21 87	597 44	
Sand Beach	Huron	363	3,500 00	1,260 00	65 00	30 50	2,160 67	1,350 00
Sand Lake	Kent	185	3,000 00	855 00	45 00	25 00	2,217 85	2,325 00
Sanilac Tp., No. 2	Sanilac	181	1,400 00	368 00	35 00	22 57	418 13	
Saranac	Ionia	305	12,500 00	1,431 00	52 50	27 00	4,001 43	
Saugatuck	Allegan	365	12,200 00	1,614 50	------	35 64	2,249 95	
Sault Ste. Marie	Chippewa	681	20,000 00	1,798 50	80 00	33 28	3,039 34	3,000 00
Schoolcraft	Kalamazoo	316	22,000 00	2,276 00	88 89	32 80	5,392 11	2,500 00
Sebewaing	Huron	305	4,000 00	479 00	48 00	19 90	1,406 99	500 00
Shelby	Oceana	210	3,500 00	787 50	50 00	25 00	2,941 63	1,647 75
Sheridan	Montcalm	312	4,000 00	1,170 00	60 00	35 00	1,258 26	
Sherwood	Branch	140	3,000 00	652 50	47 50	25 00	798 31	
South Haven	Van Buren	402	5,000 00	1,880 00	83 15	40 00	2,559 19	58 79
South Lyon	Oakland	136	3,500 00	723 00	35 61	20 00	1,230 71	2,500 00
Sparta Centre	Kent	191	4,000 00	1,180 85	60 00	29 79	1,340 35	
Spring Lake	Ottawa	751	10,000 00	3,078 00	100 00	34 57	4,761 65	
Springport	Jackson	123	4,500 00	1,050 00	50 00	27 50	1,979 41	1,200 00
Springwells Tp., No. 1	Wayne	1,255	13,405 00	2,172 50	65 00	32 74	3,392 20	1,750 00
Springwells Tp., No. 4	Wayne	1,819	5,000 00	1,518 25	50 00	26 45	2,245 57	
Stanton	Montcalm	626	6,000 00	3,156 60	------	37 00	4,149 39	284 23
Stoneville	Marquette	185	2,000 00	1,900 00	100 00	45 00	2,395 43	
Sturgis	St. Joseph	571	30,000 00	3,866 00	100 00	37 81	7,402 55	4,000 00
Sumner	Gratiot	109	300 00	401 75	36 86	15 00	465 43	
Swartz Creek	Genesee	118	500 00	455 00	40 00	18 00	503 70	
Tawas City	Iosco	289	3,500 00	1,400 00	75 00	31 50	2,725 34	1,820 00
Tecumseh	Lenawee	591	36,000 00	4,350 00	120 00	31 50	5,924 82	
Tekonsha	Calhoun	180	8,000 00	870 00	50 00	25 00	5,386 56	9,159 69
Thornville	Lapeer	114	2,000 00	534 00	48 00	23 33	625 93	
Three Oaks	Berrien	254	5,900 00	1,360 00	90 00	28 67	1,844 73	
Three Rivers, No. 1	St. Joseph	621	15,000 00	3,730 00	120 00	31 62	5,004 54	
Three Rivers, No. 4	St. Joseph	300	4,000 00	1,370 00	60 00	24 00	1,865 91	
Traverse City	Gr. Traverse	709	10,000 00	4,035 00	133 33	35 00	5,978 88	
Trenton	Wayne	438	3,000 00	950 00	------	31 66	20,564 49	
Tuscola	Tuscola	146	1,200 00	700 00	50 00	20 00	833 80	
Union City	Branch	478	20,000 00	2,896 50	67 50	30 93	8,241 18	14,495 00
Unionville	Tuscola	192	2,500 00	562 50	41 66	20 83	603 20	
Utica	Macomb	322	10,000 00	1,943 45	102 39	92 00	2,667 98	

TABLE XIV.—*Continued.*

Districts.	Counties.	No. of Children between 5 and 20 years.	Estimated Valuation of School Property.	Amount paid for Superintendence and Instruction.	Av. Monthly Wages of Teachers.		Total Expenditures.	Total Indebtedness.
					Men.	Women.		
Vandalia	Cass	187	$10,000 00	$1,062 50	$55 00	$23 33	$1,977 42	$900 00
Vassar	Tuscola	490	10,000 00	2,555 00	86 15	30 53	4,676 31	4,686 00
Vermontville	Eaton	195	10,000 00	1,213 00	62 50	28 56	1,553 92	
Vernon	Shiawassee	173	1,800 00	1,000 00	50 00	25 00	1,169 69	
Vicksburg	Kalamazoo	226	6,000 00	1,451 00	59 66	20 31	1,903 79	
Vriesland	Ottawa	210	550 00	668 50	43 85	23 00	752 20	
Wacousta	Clinton	101	1,200 00	540 00	45 00	25 00	661 33	
Washington	Macomb	95	1,500 00	467 50	35 83	19 87	585 52	
Washington Tp., No. 1	Sanilac	114	600 00	337 00	36 33	.....	385 43	
Washington Tp., No. 2 fl	Sanilac	208	400 00	315 00	31 30	.....	357 30	
Watervliet	Berrien	141	2,200 00	505 00	35 00	25 00	629 68	
Watrousville	Tuscola	103	500 00	720 00	48 37	23 62	809 17	
Wayland	Allegan	210	4,500 00	868 75	47 64	17 60	2,400 17	2,400 00
Wayne	Wayne	397	20,000 00	2,050 00	80 00	25 00	4,073 52	15,550 00
Webberville	Ingham	215	2,500 00	626 63	44 62	25 00	694 81	
West Bay City, No. 1	Bay	860	12,000 00	2,355 00	95 00	29 08	4,059 28	1,700 00
West Bay City, No. 2	Bay	1,452	15,000 00	5,004 25	105 00	39 66	11,832 90	1,500 00
West Bay City, No. 3	Bay	330	4,500 00	730 00	45 00	28 00	1,758 25	1,550 00
Whitehall	Muskegon	551	20,000 00	2,800 00	90 00	38 00	9,094 00	5,000 00
White Pigeon	St. Joseph	289	20,000 00	2,790 00	115 00	38 00	3,852 76	
White Rock	Huron	113	2,000 00	482 00	40 23	20 00	537 42	
Williamston	Ingham	361	15,000 00	1,786 00	65 00	32 45	3,789 22	15,000 00
Wilson Tp., No. 1	Alpena	182	2,000 00	1,200 00	35 00	36 66	2,285 90	
Woodland	Barry	96	300 00	343 00	30 00	22 30	392 30	
Wyandotte	Wayne	1,381	45,000 00	4,502 00	53 68	31 65	6,914 65	900 00
York Tp., No. 1 fl	Washtenaw	188	2,000 00	564 00	44 44	18 22	796 53	1,072 31
Ypsilanti	Washtenaw	1,452	54,000 00	10,260 00	83 87	36 17	15,898 84	3,000 00
Zeeland	Ottawa	419	5,000 00	1,128 00	52 50	20 45	2,250 59	2,000 00
Zilwaukee	Saginaw	441	6,000 00	1,693 75	55 56	31 97	2,066 11	
Totals	439	241,186	$6,271,963 00	$1,151,688 68	$72 96	$33 45	$2,160,399 42	$1,069,111 83

TABLE XV.

Financial Statistics of Two Hundred and Fifty-nine Graded Schools, as reported by Superintendents and Principals, for the School Year 1881-2.

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
Ada	$360 00	$198 00	.....	$558 00	$119 00	$677 00	$5 58	$1 19	$6 77
Addison	450 00	216 00	.....	666 00	150 00	816 00	6 58	1 48	8 06
Adrian	1,600 00	11,510 50	$800 00	13,910 50	4,619 80	18,530 30	13 33	4 43	17 76
Albion	1,100 00	3,623 00	.....	4,723 00	1,478 98	6,201 98	10 40	3 26	13 66
Allegan	800 00	3,258 00	.....	4,058 00	2,675 91	6,733 91	9 05	5 97	15 02
Allen	405 00	225 00	.....	630 00	150 00	780 00	9 00	2 14	11 14
Almont	800 00	900 00	.....	1,700 00	919 60	2,619 60	9 60	5 20	14 80
Alpena	1,200 00	6,271 00	350 00	7,821 00	1,710 00	9,531 00	11 43	2 50	13 93
Ann Arbor	1,800 00	17,225 00	1,100 00	20,125 00	5,180 53	25,305 53	13 55	4 27	17 82
Athens	585 00	270 00	.....	855 00	140 00	995 00	9 00	2 14	11 14

TABLE XV.—*Continued.*

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
Augusta	$540 00	$720 00	.....	$1,260 00	$386 34	$1,646 34	$7 73	$2 37	$10 10
Au Sable	800 00	760 00	.....	1,560 00	293 26	1,853 26	9 63	1 81	11 44
Bancroft	477 25	351 75	.....	829 00	102 91	931 91	6 37	79	7 16
Bangor Tp., No. 2	700 00	756 00	.....	1,456 00	448 82	1,904 82	7 87	2 43	10 30
Bangor Tp., No. 3 fl	360 00	180 00	.....	540 00	157 43	697 43	7 20	2 09	9 29
Bath	375 00	222 00	.....	597 00	130 50	727 50	4 97	1 08	6 05
Battle Creek	1,600 00	9,883 97	$210 00	11,693 97	4,095 72	15,789 69	11 50	4 03	15 53
Beacon	1,000 00	18,000 00	.....	2,800 00	651 22	3,451 22	10 98	2 56	13 54
Belding	600 00	550 00	.....	1,150 00	378 17	1,528 17	8 15	2 68	10 83
Bellevillie	600 00	400 00	.....	1,000 00	651 85	1,651 85	9 00	5 87	14 87
Benton Harbor	800 00	2,110 00	.....	2,910 00	1,179 73	4,089 73	8 13	3 29	11 42
Benton Tp., No. 2	500 00	.....	.....	500 00	50 00	550 00	7 14	71	7 85
Berlin	360 00	175 00	.....	535 00	61 90	596 90	6 60	76	7 36
Berrien Springs	720 00	900 00	.....	1,620 00	807 70	2,427 70	8 21	4 36	12 57
Big Rapids	1,210 00	4,195 00	.....	5,405 00	.....	.....	8 72	.....	.....
Birmingham	800 00	1,280 00	.....	2,080 00	778 94	2,858 94	5 01	1 87	6 88
Blissfield Tp., No. 1	600 00	640 00	.....	1,240 00	423 76	1,663 76	7 57	2 56	10 13
Blissfield Tp., No. 2	620 00	590 00	.....	1,210 00	360 00	1,570 00	8 52	2 54	11 06
Bloomingdale	348 00	240 00	.....	588 00	100 00	688 00	6 91	1 17	8 08
Breedsville	350 00	325 00	.....	675 00	57 79	732 79	10 88	93	11 11
Bridgeport	405 00	252 00	.....	657 00	191 26	848 26	7 38	2 15	9 53
Brighton	1,000 00	1,070 00	.....	2,070 00	620 00	2,690 00	11 31	3 38	14 69
Bronson	720 00	468 00	.....	1,188 00	316 00	1,504 00	6 20	1 65	7 85
Brooklyn	800 00	824 00	.....	1,624 00	329 88	1,953 88	10 82	2 19	13 01
Buchanan	900 00	1,947 50	.....	2,847 50	469 77	3,317 27	7 91	1 30	9 21
Burr Oak	630 00	697 00	.....	1,327 00	442 59	1,769 59	6 90	2 30	9 20
Cadillac	1,000 00	1,848 12	.....	2,848 12	1,029 43	3,877 55	9 99	3 66	13 65
Caledonia	600 00	240 00	60 00	900 00	300 00	1,200 00	5 84	1 94	7 78
Calumet	2,150 00	9,364 75	22 50	11,537 25	5,126 50	16,653 75	10 00	4 43	14 43
Cannonsburg	360 00	180 00	.....	540 00	102 44	642 44	5 87	1 11	6 98
Capac	500 00	500 00	.....	1,000 00	239 38	1,239 38	7 57	1 81	9 38
Caro	900 00	2,443 00	.....	3,343 00	957 79	4,300 79	9 18	2 35	11 53
Carson City	650 00	840 00	.....	1,490 00	225 00	1,715 00	7 77	1 16	8 93
Cassopolis	850 00	1,464 00	.....	2,314 00	400 00	2,714 00	11 18	1 94	13 12
Central Mine	1,000 00	720 00	.....	1,720 00	524 16	2,244 16	10 00	3 05	13 05
Centre Line	450 00	40 00	.....	490 00	88 75	578 75	5 44	98	6 42
Centreville	800 00	1,200 00	.....	2,050 00	740 91	2,790 91	10 35	2 28	12 58
Ceresco	240 00	225 00	.....	465 00	90 00	555 00	5 47	1 05	6 52
Charlevoix	585 00	540 00	.....	1,125 00	199 52	1,324 52	8 03	1 42	9 45
Charlotte	1,000 00	5,725 00	.....	6,725 00	.....	.....	11 17	.....	.....
Chelsea	800 00	1,520 00	.....	2,320 00	468 14	2,788 14	8 28	1 67	9 95
Clare	450 00	540 00	.....	990 00	200 00	1,190 00	8 46	1 71	10 17
Clayton	425 00	337 50	.....	762 50	170 19	932 69	10 16	2 27	12 43
Clinton	775 00	1,090 00	.....	1,865 00	344 66	2,209 66	9 81	1 81	11 62
Coldwater	2,000 00	6,928 00	550 00	9,478 00	2,548 49	12,026 49	13 78	3 70	17 48
Coloma	228 40	136 00	.....	364 40	76 63	441 03	3 64	76	4 40
Colon	600 00	480 00	.....	1,080 00	324 00	1,404 00	8 64	2 59	11 23
Commerce	300 00	.....	.....	300 00	30 00	330 00	4 61	46	5 07
Concord	750 00	840 00	.....	1,590 00	356 00	1,946 00	7 87	1 76	9 63
Constantine	1,200 00	2,160 00	.....	3,360 00	600 00	3,960 00	10 18	1 81	11 99
Coopersville	480 00	380 00	.....	860 00	109 00	969 00	5 18	65	5 83
Corunna	1,000 00	2,180 00	.....	3,180 00	1,000 58	4,180 58	9 18	2 88	12 06
Croswell	315 00	258 75	.....	573 75	112 95	686 70	4 09	80	4 89
Dansville	600 00	740 00	.....	1,340 00	278 00	1,617 00	9 37	1 94	11 31
Davisburg	351 20	154 00	.....	505 20	54 33	559 53	8 42	90	9 32
Dearborn	525 00	270 00	.....	795 00	185 00	980 00	6 68	1 55	8 23
Decatur	850 00	1,754 00	.....	2,604 00	489 26	3,093 26	9 10	1 71	10 81
Detroit	3,300 00	159,137 66	4,050 00	166,487 66	57,153 29	223,640 95	12 94	4 44	17 38
Dexter	1,000 00	1,626 00	.....	2,626 00	666 68	3,292 68	9 94	2 52	12 46
Douglas	585 00	652 50	.....	1,237 50	384 55	1,622 05	10 22	3 18	13 40

TABLE XV.—*Continued.*

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
Dowagiac	$900 00	$2,715 00		$3,615 00	$500 00	$4,115 00	$13 19	$1 82	$15 01
Drenthe	500 00	180 00		680 00	87 15	767 15	6 80	87	7 67
Dryden	475 00	210 00		685 00	50 00	735 00	6 46	46	6 92
East Saginaw	2,200 00	27,129 50	$1,600 00	30,929 50	7,582 82	38,512 32	11 51	2 91	14 42
East Tawas	950 00	1,080 00		2,030 00	1,475 55	3,505 55	9 90	7 20	17 10
Eaton Rapids	850 00	2,023 00		2,873 00	646 03	3,519 03	7 45	1 68	9 14
Edmore	500 00	800 00		1,300 00	436 97	1,736 97	5 64	1 89	7 53
Edwardsburg	495 00	540 00		1,035 00	245 79	1,280 79	6 65	1 65	8 30
Elk Rapids	800 00	1,763 24		2,563 24	1,184 62	3,747 86	11 24	5 40	16 64
Elsie	630 00			630 00	94 50	724 50	5 23	78	6 01
Erie	307 00	450 00		757 00	90 00	847 00	7 14	85	7 99
Farmers	245 00			245 00	53 03	298 03			
Farwell	405 00	585 00		990 00	157 78	1,147 78	10 42	1 66	12 08
Fenton	900 00	3,920 00		4,820 00	646 50	5,466 50	8 77	1 17	9 94
Ferrysburg	540 00	538 00		1,078 00	250 00	1,328 00	6 34	1 47	7 81
Fillmore Tp., No. 1	280 00	176 00		456 00	169 91	625 91	4 38	1 63	6 01
Flat Rock	600 00	480 00		1,080 00	433 85	1,513 85	7 82	3 14	10 96
Flint	1,200 00	13,174 25	400 00	13,174 25	5,178 33	19,952 58	10 80	3 78	14 58
Flushing	800 00	1,200 00		2,000 00	249 73	2,249 73	10 47	1 30	11 77
Fowler	435 00	217 00		652 00	223 88	875 88	8 93	3 20	12 13
Franklin Tp., No 1	730 00	850 00		1,580 00	312 81	1,892 81	11 20	2 23	13 43
Franklin Tp., No. 2	650 00	925 00		1,575 00	367 20	1,942 20	11 20	2 84	14 04
Franklin Tp., No. 5	750 00	865 00		1,615 00	529 08	2,144 08	8 00	2 61	10 61
Freeland	400 00	240 00		640 00	115 00	755 00	9 01	1 62	10 63
Galesburg	597 00	847 40		1,444 40	299 63	1,744 03	8 02	1 66	9 68
Galien	550 00	350 00		900 00			8 41		
Girard	285 00	180 00		465 00	159 88	624 88	5 81	2 00	7 81
Gobleville	410 00	313 50		723 50	181 35	904 85	10 33	2 57	12 90
Goodrich	450 00	180 00		630 00	67 15	697 15	10 16	1 08	11 24
Graafschap	350 00	200 00		550 00	45 00	595 00	4 40	36	4 76
Grand Haven	1,200 00	6,446 00	400 00	8,046 00	3,606 67	11,652 67	9 14	4 09	13 23
Grand Ledge	700 00	1,162 50		1,862 50	165 00	2,027 50	6 84	60	7 44
Grand Rapids	2,000 00	55,872 64	2,000 00	59,872 64	13,169 99	75,041 63	13 45	3 41	16 86
Grand Rapids Tp., No. 1	700 00	540 00		1,240 00	524 30	1,764 30	6 88	2 91	9 79
Grandville	632 00	1,275 20		1,907 20	622 41	2,529 61	8 36	2 73	11 09
Grass Lake	825 00	832 00		1,657 00	405 84	2,062 84	11 92	2 63	14 55
Greenland Tp., No. 1	750 00	300 00		1,050 00	233 93	1,283 93	13 12	2 92	16 04
Greenland Tp., No. 2, fl.	750 00	250 00		1,000 00	293 70	1,293 70	22 74	6 67	29 41
Greenville	1,500 00	5,080 00	250 00	6,830 00	2,080 00	8,910 00	12 89	3 92	16 81
Grosse Isle	425 00	517 50		942 50	245 85	1,188 35	7 30	1 90	9 20
Hadley	720 00	234 00		954 00	95 88	1,049 88	8 37	84	9 21
Hancock	1,400 00	3,681 25	292 50	5,373 75	2,720 97	8,094 72	10 77	5 45	16 22
Hanover	600 00	600 00	350 00	1,550 00	312 00	1,862 00	13 84	2 78	16 62
Harbor Springs	450 00	607 50		1,057 50	620 10	1,677 60	7 04	4 13	11 17
Harrisville	560 00	810 00		1,370 00	378 24	1,748 24	10 55	2 91	13 46
Hart	630 00	630 00		1,260 00	318 25	1,578 25	9 84	2 49	12 33
Hartford	540 00	952 00		1,492 00	237 37	1,729 37	9 11	1 45	10 56
Hastings	1,000 00	2,572 63		3,572 63	1,034 95	4,607 58	7 09	2 05	9 14
Hillsdale	1,000 00	3,925 00		4,925 00	2,931 57	7,756 57	7 37	4 49	11 85
Holland	700 00	2,425 00		3,125 00	1,088 35	4,213 35	5 63	1 96	7 59
Homer	650 00	1,080 00		1,730 00	438 48	2,168 48	9 50	2 41	11 91
Houghton	1,350 00	6,250 00	300 00	7,900 00	3,911 20	11,811 20	13 47	6 66	20 13
Howard City	700 00	650 00		1,350 00	241 34	1,591 34	11 03	1 96	12 99
Howell	1,000 00	3,030 00		4,030 00	983 57	5,013 57	10 02	2 44	12 46
Hubbardston	450 00	630 00		1,080 00	347 85	1,427 85	6 92	2 23	9 15
Hudson Tp., No. 5	600 00	558 00		1,158 00	343 69	1,501 69	11 35	3 37	14 72
Imlay City	750 00	800 00		1,550 00	659 57	2,209 57	6 98	2 97	9 95
Inverness Tp., No. 3	540 00	270 00		810 00	160 00	970 00	11 09	2 22	13 31
Ithaca	1,000 00	810 00		1,810 00	347 09	2,157 09	6 51	1 25	7 76
Jackson, No. 1									

TABLE NO. XV.—*Continued.*

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
Jackson, No. 17	$1,200 00	$6,585 82	.....	$7,785 82	$2,911 91	$10,697 13	$10 26	$3 83	$14 09
Jonesville	1,200 00	1,780 00	.....	2,980 00	811 00	6,771 00	14 45	3 94	18 39
Kalamazoo	1,800 00	16,629 50	$360 00	18,789 50	5,606 99	24,396 49	12 65	3 77	16 42
Lake Linden	1,200 00	5,575 00	.....	6,775 00	2,225 00	9,000 00	14 66	4 81	19 47
Lakeside	550 00	700 00	.....	1,250 00	145 00	1,395 00	6 32	74	7 06
L'Anse	800 00	1,000 00	.....	1,800 00	329 24	2,129 24	7 75	1 42	9 17
Lansing	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lawrence	600 00	720 00	.....	1,320 00	223 44	1,543 44	10 64	1 80	12 44
Lawton	750 00	669 40	.....	1,419 40	361 34	1,780 74	7 88	2 00	9 88
Linden	550 00	500 00	.....	1,050 00	103 64	1,153 64	6 77	66	7 43
Lisbon	487 50	250 00	.....	735 50	125 00	862 50	14 18	2 40	16 58
Litchfield	446 00	758 25	.....	1,204 25	258 63	1,462 88	5 65	1 22	6 87
Lowell	780 00	2,422 00	.....	3,202 00	1,905 99	5,107 99	9 75	5 60	15 35
Macon	315 00	180 00	.....	495 00	104 00	599 00	5 62	1 18	6 80
Manchester	1,000 00	2,090 00	.....	3,090 00	677 69	3,767 69	11 32	2 44	13 76
Manistee	1,300 00	8,440 00	.....	9,740 00	2,750 84	12,490 84	11 44	3 23	14 67
Marcellus	436 25	279 00	.....	715 25	91 92	807 17	4 47	57	5 04
Marine City	700 00	1,125 00	.....	1,825 00	2,523 62	4,348 62	8 11	11 21	19 32
Marlette	500 00	450 00	.....	950 00	.....	.....	4 42	.....	.....
Marquette	1,650 00	6,137 50	.....	7,787 50	5,762 62	13,549 12	9 18	6 79	15 97
Marshal	1,400 00	5,968 35	.....	7,368 35	9,048 82	16,417 17	12 40	15 20	27 60
Marysville	360 00	180 00	.....	540 00	130 98	670 98	6 75	1 63	8 38
Mason	900 00	2,163 00	.....	3,063 00	826 47	3,889 47	10 49	2 83	13 32
Mattawan	175 00	212 50	.....	387 50	163 90	551 40	3 68	1 56	5 24
Memphis	600 00	480 00	.....	1,080 00	105 87	1,185 87	7 66	75	8 41
Mendon	600 00	1,160 00	.....	1,760 00	221 04	1,981 04	12 84	1 61	14 45
Menominee	1,000 00	3,190 00	.....	4,190 00	1,310 78	5,500 78	11 11	3 48	14 59
Metamora	450 00	285 00	.....	735 00	235 89	970 89	8 54	2 74	10 28
Michigamme	675 00	575 00	.....	1,250 00	1,514 99	2,764 99	5 10	5 94	11 04
Middleville	525 00	675 00	.....	1,200 00	438 40	1,638 40	5 86	1 95	7 31
Midland, No. 3	1,000 00	1,600 00	.....	2,600 00	1,121 81	3,721 81	9 32	4 09	13 41
Midland, No. 6	450 00	216 00	.....	666 00	238 33	904 33	6 66	2 38	9 04
Millington	273 33	292 50	.....	665 83	72 00	737 83	4 75	51	5 26
Monroe	1,000 00	2,050 00	150 00	3,200 00	1,897 98	4,097 98	9 91	5 61	15 52
Morenci	500 00	1,152 00	.....	1,652 00	565 60	2,217 60	5 38	1 84	7 22
Morley	450 00	315 00	.....	765 00	161 64	926 64	9 56	2 02	11 58
Moscow	340 00	115 00	.....	455 00	110 48	565 48	6 40	1 55	7 95
Mount Clemens	1,200 00	2,080 00	.....	3,280 00	1,082 32	4,362 32	8 06	2 66	10 72
Muskegon	1,450 00	15,287 25	1,325 00	18,062 25	5,769 96	23,832 21	11 54	3 68	15 22
Napoleon	600 00	600 00	.....	1,200 00	184 25	1,384 25	10 34	1 58	11 92
National Mine	900 00	675 00	.....	1,575 00	902 25	2,477 25	6 70	3 84	10 54
Negaunee	1,300 00	5,400 00	.....	6,700 00	4,230 65	10,930 65	9 66	6 10	15 76
Newaygo	1,000 00	852 00	.....	1,852 00	100 00	1,952 00	6 50	35	6 85
New Buffalo	500 00	572 50	.....	1,072 50	114 83	1,187 33	8 82	94	9 76
New Haven	540 00	423 00	.....	963 00	279 87	1,242 87	5 87	1 70	7 57
New Troy	400 00	200 00	.....	600 00	145 06	745 06	6 75	1 36	8 11
Niles	1,200 00	6,107 58	441 00	7,748 58	3,358 03	11,106 53	10 54	3 36	13 86
Northville	700 00	1,140 00	.....	1,840 00	310 80	2,150 80	9 94	1 68	11 62
Norway	800 00	1,511 00	.....	2,311 00	910 45	3,221 45	10 22	4 02	14 24
Okemos	330 50	525 50	.....	856 00	190 20	1,046 20	10 83	2 40	13 23
Onondaga	405 00	160 00	.....	565 00	55 00	620 00	9 74	95	10 69
Ortonville	490 00	234 00	.....	724 00	200 01	924 01	7 62	2 10	9 72
Oscoda	800 00	1,625 00	.....	2,425 00	561 47	2,986 47	6 08	1 56	7 64
Osseo	240 00	404 00	.....	644 00	125 07	769 07	6 77	1 32	8 09
Otisville	400 00	576 00	.....	976 00	150 00	1,126 00	7 90	1 19	9 09
Otter Lake	280 00	184 10	.....	464 10	158 22	622 32	3 54	1 20	4 74
Ovid	800 00	1,392 00	.....	2,192 00	674 86	2,866 86	8 06	2 48	10 54
Owosso	1,000 00	4,678 60	.....	5,678 60	2,311 56	7,990 16	11 19	4 55	15 74
Palmyra	295 00	220 00	.....	515 00	227 21	742 21	4 29	1 89	6 18
Palo	475 00	493 50	.....	968 50	523 94	1,492 44	9 68	5 23	14 91

TABLE XV.—*Continued.*

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
Paris Tp., No. 1	$340 00	$180 00	$7 00	$527 00	$55 32	$582 32	$8 19	$0 86	$9 05
Parma	700 00	957 40	.....	1,657 40	498 74	2,156 14	8 00	2 49	10 49
Petersburg	405 00	400 00	.....	805 00	369 34	1,174 34	5 19	2 38	7 57
Petoskey	900 00	1,549 50	.....	2,449 50	518 03	2,967 53	7 87	1 66	9 53
Phœnix	900 00	1,100 00	.....	2,000 00	713 62	2,713 62	10 86	3 87	14 73
Pierson	500 00	250 00	.....	750 00	68 04	818 04	9 03	82	9 85
Pinckney	540 00	270 00	.....	810 00	10 00	820 00	8 70	10	8 80
Plainwell	900 00	1,737 60	.....	2,537 60	522 14	3,059 74	8 13	1 67	9 80
Plymouth	775 00	1,500 00	.....	2,275 00	500 00	2,775 00	7 36	1 51	8 87
Pontiac	1,200 00	7,536 50	.....	8,736 50	2,074 60	10,811 10	11 99	2 85	14 84
Port Austin	700 00	600 00	.....	1,300 00	250 00	1,550 00	10 15	1 17	11 32
Port Crescent	520 00	.....	.....	520 00	184 31	704 31	3 71	1 10	4 81
Port Hope	600 00	250 00	.....	850 00	166 00	1,106 00	5 66	1 16	6 82
Port Huron	1,200 00	8,890 00	.....	10,090 00	4,534 59	14,624 59	11 68	3 36	15 04
Potterville	320 00	245 00	.....	565 00	130 00	695 00	5 43	1 25	6 68
Reading	600 00	800 00	.....	1,400 00	240 00	1,640 00	8 48	1 45	9 93
Republic	1,320 00	1,350 00	.....	2,670 00	1,462 36	4,132 36	8 21	4 49	12 70
Richmond	540 00	450 00	.....	990 00	.....	.....	8 78	.....	.....
Rochester	700 00	530 00	.....	1,230 00	306 92	1,536 92	7 73	1 93	9 66
Rockford	750 00	900 00	.....	1,650 00	584 09	2,234 00	8 59	3 04	11 63
Rockland	1,000 00	400 00	.....	1,400 00	685 00	2,085 00	12 50	6 11	18 61
Romeo	1,500 00	2,300 00	.....	3,800 00	512 00	4,312 00	10 24	1 40	11 64
Saginaw	1,700 00	12,492 50	780 00	14,972 50	3,050 00	18,022 50	9 81	2 00	11 81
St. Clair	900 00	3,100 00	.....	4,000 00	1,442 83	5,442 83	9 77	3 52	13 29
St. Johns	1,000 00	3,960 00	.....	4,960 00	600 00	5,560 00	13 73	1 65	15 38
St. Joseph	900 00	3,300 00	.....	4,200 00	1,400 00	5,600 00	8 84	2 92	11 76
St. Louis	1,000 00	2,408 00	84 00	3,492 00	300 00	3,792 00	8 12	70	8 82
Sand Beach	650 00	610 00	.....	1,260 00	300 00	1,560 00	7 45	1 78	9 23
Sanilac Tp., No. 2	210 00	158 00	.....	368 00	50 00	418 00	4 65	63	5 28
Saranac	675 00	756 00	.....	1,431 00	253 64	2,515 64	7 30	1 29	8 59
Saugatuck	500 00	1,114 50	.....	1,614 50	700 00	2,314 50	6 69	2 90	9 59
Sault Ste. Marie	800 00	1,000 00	.....	1,800 00	510 00	2,310 00	.....	.....	.....
Schoolcraft	800 00	1,476 00	.....	2,276 00	661 11	2,942 11	9 66	2 83	12 51
Shelby	425 00	362 50	.....	787 50	245 00	1,032 50	5 12	1 61	6 73
South Haven	800 00	1,080 00	.....	1,880 00	523 00	2,403 00	6 26	1 74	8 00
Spring Lake	900 00	2,176 00	.....	3,076 00	350 00	3,426 00	5 69	65	6 34
Springport	500 00	550 00	.....	1,050 00	98 00	1,138 00	9 46	88	10 34
Springwells Tp., No. 1	650 00	1,522 50	.....	2,172 50	1,219 70	3,392 20	5 06	2 84	7 90
Stanton	800 00	2,356 60	.....	3,156 60	1,202 79	4,359 39	9 25	3 53	12 78
Stoneville	1,000 00	900 00	.....	1,900 00	.....	.....	22 88	.....	.....
Sturgis	1,000 00	2,916 00	.....	3,916 00	1,091 50	5,007 50	11 15	3 10	14 25
Swartz Creek	360 00	90 00	.....	450 00	50 00	500 00	4 08	45	4 53
Tawas City	780 00	650 00	.....	1,430 00	545 00	1,975 00	7 76	3 04	10 80
Tecumseh	1,200 00	3,150 00	.....	4,350 00	1,574 82	5,924 82	11 60	4 19	15 79
Thornville	384 00	210 00	.....	594 00	31 93	625 93	7 42	40	7 82
Three Oaks	720 00	640 00	.....	1,360 00	457 24	1,817 24	6 18	2 07	8 25
Traverse City	1,200 00	3,195 00	.....	4,395 00	800 00	5,195 00	8 14	1 48	9 62
Trenton	400 00	550 00	.....	950 00	494 89	1,444 89	3 96	1 87	5 86
Tuscola	500 00	200 00	.....	700 00	133 80	833 80	8 00	1 57	9 57
Union City	1,000 00	1,900 00	.....	2,900 00	2,119 70	5,019 70	11 19	8 18	19 37
Vandalia	467 50	595 00	.....	1,062 50	914 72	1,977 22	5 65	4 86	10 51
Vassar	1,000 00	1,504 00	.....	2,504 00	535 00	3,039 00	10 00	2 14	12 14
Vernon	500 00	500 00	.....	1,000 00	72 79	1,072 79	6 25	45	6 70
Vriesland	438 50	230 00	.....	668 50	83 70	752 20	5 57	64	6 21
Wacousta	315 00	225 00	.....	540 00	121 53	661 53	10 38	2 33	12 71
Washington Tp., No. 2, fl	315 00	.....	.....	315 00	53 09	368 09	3 15	53	3 68
Watervliet	280 00	225 00	.....	505 00	53 82	558 82	4 00	43	4 43
Watrousville	550 00	270 00	.....	820 00	60 00	880 00	10 00	73	10 73
Wayland	435 00	464 00	.....	899 00	236 38	1,135 38	6 37	1 67	8 04
Webberville	401 63	225 00	.....	626 63	68 18	1,139 04	4 74	51	5 25

TABLE XV.—*Continued.*

Districts.	Amount paid Superintendent or Principal.	Amount paid regular Teachers.	Amount paid special Teachers.	Total amount paid for Instruction.	Amount paid for Incidentals.	Total cost of Schools.	Cost per capita for Instruction.	Cost per capita for Incidentals.	Total cost per capita for Education.
West Bay City, No. 1.	$950 00	$1,405 00	.....	$2,355 00	$625 60	$2,980 00	$7 36	$1 95	$9 31
Whitehall	900 00	1,900 00	$170 00	2,970 00	1,622 69	4,592 69	12 53	6 85	19 38
White Pigeon	1,150 00	1,640 00	.....	2,790 00	1,062 76	3,852 76	11 16	4 47	15 63
White Rock	360 00	120 00	.....	480 00	100 00	580 00	6 40	1 33	7 73
Williamston	650 00	1,136 00	.....	1,786 00	.....	.....	7 73	.....	.....
Wyandotte	700 00	3,850 00	.....	4,550 00	1,000 00	5,550 00	7 25	1 57	8 82
Ypsilanti	1,300 00	8,060 00	900 00	10,260 00	3,638 84	13,898 84	12 47	4 44	16 91
Zeeland	525 00	603 00	.....	1,128 00	412 22	1,540 22	4 96	1 37	6 33
Zilwaukee	750 00	943 75	.....	1,698 75	403 40	2,097 15	5 29	1 26	6 55

TABLE XVI.

Miscellaneous Statistics of Two Hundred and Fifty-five Graded Schools, as reported by Superintendents and Principals, for the School Year 1881-2.

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	Number of Men Teachers.	Number of Women Teachers.	Number of Special Teachers.	Ave. No. of Pupils to each Teacher.	Portion of Superintendent's Time given to Supervision.	Number of Pupils Studying— Latin.	Greek.	French.	German.	Is Special Instruction given in— Vocal Music?	Drawing?	Penmanship?
Ada	147	100	65	.....	2	....	37	.....	....	....	....	....	....	....	....
Addison	134	70	65	1	1	....	35	.....	....	....	....	....	....	....	....
Adrian	1,721	1,043	971	3	30	1	34	5-6	37	....	7	18	....	yes	yes
Albion	661	454	426	1	13	....	35	1-2	....	....	....	....	....	yes	yes
Allegan	638	448	427	1	12	....	34	3-8	23	....	....	6	....	....	....
Allen	86	70	67	1	1	....	34	.....	....	....	....	....	....	....	yes
Almont	239	177	147	1	3	....	44	.....	5	....	....	....	....	....	....
Alpena	1,302	682	621	2	14	1	....	2-3	8	....	....	6	yes	....	....
Ann Arbor	2,109	1,484	1,422	7	29	3	42	3-4	204	49	57	79	yes	yes	yes
Athens	107	90	72	1	1	....	....	.....	....	....	....	....	....	....	....
Augusta	178	163	137	2	2	....	41	1-8	....	....	....	....	....	....	....
Au Sable	227	162	115	1	2	....	54	.....	....	....	....	....	....	....	....
Bancroft	250	130	76	1	1	....	38	.....	....	....	....	....	....	....	....
Bangor Tp. No. 2	215	185	148	1	3	....	46	.....	....	....	....	....	....	....	....
Bangor Tp. No. 3, fl.	88	75	62	1	1	....	62	5-72	....	....	....	....	....	yes	yes
Bath	126	120	98	1	2	....	42	.....	....	....	....	....	....	....	....
Battle Creek	1,813	1,016	967	3	26	2	34	1-5	42	5	7	16	....	yes	yes
Beacon	528	255	209	1	3	....	64	.....	....	....	....	....	....	....	yes
Belding	252	141	126	1	2	....	47	1-12	2	....	....	....	....	....	yes
Bellevilie	147	111	100	1	2	....	34	.....	....	....	....	....	yes	yes	yes
Benton Harbor	436	358	325	1	7	....	49	1-4	4	....	....	....	....	....	....
Benton Tp. No. 2	85	70	40	1	.....	....	70	.....	....	....	....	....	yes	....	yes
Berlin	97	81	81	.....	2	....	40	.....	....	....	....	....	....	....	....
Berrien Springs	244	185	164	1	4	....	37	1-10	....	....	....	....	....	....	yes
Big Rapids	1,089	620	530	1	14	....	47	2-3	....	....	7	....	....	....	....
Birmingham	824	415	243	1	5	....	69	1-6	10	1	....	5	yes	yes	yes
Blissfield Tp. No. 1	240	169	130	1	3	....	42	1-6	8	....	....	....	....	yes	yes
Blissfield Tp. No. 2	159	142	133	1	2	....	47	1-5	4	....	....	6	....	yes	yes
Bloomingdale	106	78	78	1	1	....	36	.....	....	....	....	....	....	....	yes
Breedsville	78	62	46	1	1	....	62	.....	....	....	....	....	....	....	....
Bridgeport	125	89	63	1	1	....	45	.....	....	....	....	....	....	....	....
Brighton	323	183	167	1	4	....	37	1-2	6	....	....	....	....	yes	yes
Bronson	252	170	170	1	3	....	42	.....	....	....	....	....	....	....	....
Brooklyn	196	150	143	1	3	....	37	.....	....	....	....	....	....	....	....
Buchanan	572	359	355	1	7	....	45	1-5	5	....	....	....	....	....	yes

TABLE XVI.—*Continued.*

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	Number of Men Teachers	Number of Women Teachers.	Number of Special Teachers.	Ave. No. of Pupils to each Teacher.	Portion of Superintendent's Time given to Supervision.	Number of Pupils Studying— Latin.	Greek.	French.	German.	Is Special Instruction given in— Vocal Music?	Drawing?	Penmanship?
Burr Oak	250	192	173	1	4	....	38	.....	....	....	....	....	....	....	....
Cadillac	433	285	266	1	5	....	47	2-5	....	....	....	....	....	....	....
Caledonia	156	154	97	1	1	1	51	.....	....	....	....	....	....	....	....
Calumet	1,663	1,155	946	5	16	....	55	3-5	....	....	....	....	....	....	....
Cannonsburg	112	92	62	1	1	....	46	.....	....	....	....	....	....	....	....
Capac	227	132	121	1	2	....	44	.....	....	....	....	....	....	....	....
Caro	446	364	333	1	5-7	....	54	.....	....	....	....	....	....	....	yes
Carson City	280	193	120	1	3	....	46	.....	....	....	....	....	....	....	....
Cassopolis	272	207	191	1	5	....	35	1-12	26	1	....	16	yes	yes	yes
Central Mine	238	172	140	1	2	....	57	1-10	....	....	....	....	....	....	....
CentreLine	114	90	55	1	.....	....	55	.....	....	....	....	....	....	....	yes
Centreville	232	198	131	1	4	....	40	1-24	9	....	....	11	yes	....	yes
Ceresco	93	85	70	1	1	....	40	.....	....	....	....	....	....	....	....
Charlevoix	197	105	100	1	2	....	35	.....	....	....	....	....	....	....	....
Charlotte	969	602	563	.....	14½	....	38	1-2	16	....	....	8	....	....	....
Chelsea	494	280	252	1	6	....	41	1-6	....	....	....	....	....	....	....
Clare	161	117	114	2	1	....	....	.....	....	....	....	....	....	....	yes
Clayton	85	75	70	1	2	....	28	.....	....	....	....	....	....	....	....
Clinton	248	190	173	1	4	....	38	1-6	12	....	....	....	....	yes	yes
Coldwater	993	688	639	3	19	3	32	2-3	55	8	16	9	....	....	yes
Coloma	115	100	65	1	1	....	50	.....	....	....	....	....	....	yes	yes
Colon	140	125	107	1	2	....	42	.....	....	....	....	....	....	....	....
Commerce	80	65	40	1	.....	....	40	.....	....	....	....	....	....	....	....
Concord	244	202	133	1	3	....	33	.....	....	....	....	6	....	....	....
Constantine	468	330	276	3	5	....	41	1-5	20	....	....	24	....	....	yes
Coopersville	196	166	134	1	2	....	56	.....	....	....	....	....	....	....	....
Corunna	451	346	281	2	6	....	43	1-6	16	3	....	5	....	....	....
Croswell	161	140	100	1	1	....	50	.....	....	....	....	....	....	....	....
Dansville	218	143	134	1	3	....	36	.....	5	....	....	....	....	....	yes
Davisburg	78	60	48	1	1	....	49	.....	....	....	....	....	....	....	....
Dearborn	168	119	98	1	1	....	24	.....	....	....	....	....	yes	yes	yes
Decatur	396	286	261	1	6	....	37	1-8	8	....	....	3	....	yes	....
Detroit	25,667	12,870	12,061	10	261	1	48	all	136	14	70	117	yes	yes	yes
Dexter	326	264	247	2	5	....	37	1-10	26	....	6	5	....	yes	yes
Douglas	204	121	102	2	2	....	40	.....	....	....	....	....	....	....	yes
Dowagiac	453	274	240	3	6	....	39	3-8	10	....	....	6	....	....	....
Drenthe	113	100	87	1	1	....	55	.....	....	....	....	....	....	....	....
Dryden	93	88	80	1	1	....	46	.....	....	....	....	....	....	....	yes
East Saginaw	3,610	2,600	2,442	6	53	3	45	all	67	11	....	873	yes	yes	yes
East Tawas	388	205	184	1	3	....	57	1-8	2	....	....	....	yes	yes	yes
Eaton Rapids	481	386	329	1	7	....	48	1-6	2	....	....	15	....	....	....
Edmore	246	230	144	1	3	....	76	.....	....	....	....	....	....	....	yes
Edwardsburg	156	149	128	1	2	....	49	.....	....	....	....	....	....	....	....
Elk Rapids	244	219	191	2	4	....	36	.....	....	....	....	....	yes	yes	yes
Elsie	147	120	91	.....	3	....	49	.....	....	....	....	....	....	....	....
Erie	128	106	85	1	2	....	28	.....	....	....	....	....	....	....	yes
Farmers	85	66	38	1	.....	....	38	.....	....	....	....	....	....	....	....
Farwell	212	95	79	.....	3	....	31	.....	....	....	....	....	....	....	....
Fenton	607	491	.....	2	9	....	44	.....	40	31	7	16	yes	yes	yes
Ferrysburg	251	170	104	1	3	....	43	.....	....	....	....	....	....	....	....
Fillmore Tp. No. 1	114	104	94	1	1	....	52	.....	....	....	....	....	....	....	....
Flat Rock	155	138	123	1	2	....	46	.....	....	....	....	....	....	....	....
Flint	2,156	1,367	1,285	3	34	1	38	.....	55	5	12	14	yes	....	....
Flushing	262	191	174	1	4	....	38	5-14	....	....	....	....	....	....	....
Fowler	81	73	66	.....	.....	....	43	.....	....	....	....	....	....	....	....
Franklin Tp. No. 1	252	140	120	1	2	....	46	1-32	....	....	....	....	....	....	....
Franklin Tp. No. 2	182	129	109	1	2	....	43	.....	....	....	....	....	....	....	....
Franklin Tp. No. 5	233	202	169	1	2	....	67	.....	....	....	....	....	....	....	yes
Freeland	108	71	62	1	1	....	35	.....	....	....	....	....	....	....	yes
Galesburg	261	180	153	3	5	....	45	1-12	7	4	....	....	....	....	....

TABLE XVI.—*Continued.*

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	Number of Men Teachers.	Number of Women Teachers.	Number of Special Teachers.	Ave. No. of Pupils to each Teacher.	Portion of Superintendent's Time given to Supervision.	Number of Pupils Studying—				Is Special Instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Penmanship?
Galien	133	107	97	1	2	....	48	1-10	....	....	....	....	....	yes	....
Girard	84	80	60	1	1	....	30	.....	....	....	....	....	....	....	....
Gobleville	114	90	70	1	2	....	35	.....	....	....	....	....	....	....	yes
Goodrich	73	62	51	.....	2	....	31	.....	....	....	....	....	....	....	....
Graafschap	130	125	120	.....	2	....	62	.....	....	....	....	....	....	....	....
Grand Haven	1,778	880	794	1.7	17.6	....	49	17-20	26	....	....	....	yes	....	....
Grand Ledge	393	272	236	1	5	....	65	.....	....	....	....	....	....	....	....
Grand Rapids	8,906	4,450	4,210	10	114	....	37	all	76	11	31	69	yes	yes	yes
G'd Rapids Tp., No. 1	274	180	126	1	2	....	60	.....	....	....	....	....	....	....	....
Grandville	289	228	195	2	5	....	38	1-4	....	....	....	....	....	....	....
Grass Lake	217	139	121	1	3 1-6	....	33	1-12	13	....	....	....	....	....	....
Greenland Tp., No. 1	90	80	50	1	1	....	40	.....	4	....	....	....	....	....	....
Greenland Tp., No. 2	58	44	38	1	1	....	22	.....	....	....	....	....	....	....	yes
Greenville	801	530	507	1	14.3	....	37	1-2	9	....	15	....	yes	....	....
Grosse Isle	211	129	75	1	3	....	42	.....	....	....	....	....	....	....	yes
Hadley	137	114	91	1	1	....	56	.....	....	....	....	....	....	....	....
Hancock	499	347	309	2	6	....	52	1-3	....	....	....	....	yes	....	....
Hanover	213	112	80	1	3	....	29	.....	....	....	....	....	yes	yes	yes
Harbor Springs	170	150	130	1	3	....	50	.....	....	....	....	....	....	....	....
Harrisville	188	129	116	1	2	....	43	.....	....	....	....	....	....	....	....
Hart	158	128	113	1	3	....	41	.....	....	....	....	....	....	....	....
Hartford	274	163	146	1	4	....	54	.....	....	....	....	....	....	....	....
Hastings	766	504	463	1	10	....	47	1-3	21	....	....	6	....	yes	yes
Hillsdale	727	654	626	1	12	....	50	2-5	15	....	....	....	....	....	....
Holland	1,023	655	462	1	10	....	50	.....	....	....	....	....	....	....	....
Homer	276	182	159	1	4	....	36	1-6	....	....	....	....	....	....	....
Houghton	672	586	537	2	11	....	46	2-5	2	....	....	....	yes	....	....
Howard City	238	122	106	1	2	....	41	.....	4	....	....	....	....	....	....
Howell	668	401	361	1	9	....	40	1-8	8	....	....	5	....	....	....
Hubbardston	240	156	140	1	2	....	52	.....	....	....	....	....	....	....	....
Hudson Tp., No. 5	142	102	96	1	2	....	33	.....	....	....	....	....	....	....	....
Imlay City	399	221	199	1	3	....	55	1-5	....	....	....	....	....	....	....
Inverness Tp., No. 3	103	75	56	1	1	....	35	.....	....	....	....	....	....	....	yes
Ithaca	435	278	209	1	3	....	69	1-20	....	....	....	....	....	....	....
Jackson, No. 1	.....	.....	.....	.....	.....	....	....	.....	....	....	....	....	....	....	....
Jackson, No. 17	1,502	758	699	1	19	....	37	1-2	....	....	....	....	....	....	....
Jonesville	332	206	197	2	4	....	32	1-3	8	....	3	....	....	....	....
Kalamazoo	3,141	1,485	1,387	2	44	....	34	all	40	5	13	25	....	....	yes
Lake Linden	671	462	340	1	10	....	44	.....	....	....	....	....	yes	....	yes
Lakeside	266	196	152	1	2	....	65	1-5	....	....	....	....	....	....	....
L'Anse	244	232	146	1	3	....	58	.....	....	....	....	....	....	....	yes
Lansing	.....	.....	.....	.....	.....	....	....	.....	....	....	....	....	....	....	....
Lawrence	203	196	180	1	3	....	65	1-6	....	....	....	....	....	....	yes
Lawton	213	180	167	1	3	....	45	.....	....	....	....	....	....	....	....
Linden	186	155	123	1	2	....	52	.....	....	....	....	....	....	....	....
Lisbon	109	52	48	1	1	....	26	.....	....	....	....	....	....	....	....
Litchfield	264	213	145	1	3	....	53	1-25	....	....	....	....	....	....	....
Lowell	497	339	312	2	7	....	37	.....	....	....	....	....	....	....	....
Macon	106	88	70	1	1	....	44	.....	....	....	....	....	....	....	yes
Manchester	313	273	234	2	5	....	31	1-3	9	2	1	12	....	....	....
Manistee	1,725	851	809	2	18.3	....	43	2-3	17	2	....	17	....	....	....
Marcellus	162	160	140	1	2	....	45	.....	....	....	....	....	....	....	yes
Marine City	321	225	195	1	5	....	37	.....	....	....	....	....	....	....	....
Mariette	248	215	183	1	2	....	71	.....	....	....	....	....	yes	yes	yes
Marquette	1,445	848	771	1	15	....	53	5-11	19	1	....	....	....	....	....
Marshall	897	594	558	1	18	....	33	1-2	12	....	6	28	....	....	....
Marysville	108	80	62	1	1	....	40	.....	....	....	....	....	....	....	....
Mason	536	292	211	1	8	....	33	3-8	14	....	....	18	....	....	....
Memphis	220	141	155	1	2	....	47	.....	....	....	....	....	yes	....	yes
Mendon	272	137	122	1	4	....	35	1-6	1	....	....	7	....	....	....

TABLE XVI.—*Continued.*

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	Number of Men Teachers.	Number of Women Teachers.	Number of Special Teachers.	Ave. No. of Pupils to each Teacher.	Portion of Superintendent's Time given to Supervision.	Number of Pupils Studying— Latin.	Greek.	French.	German.	Is Special Instruction given in— Vocal music?	Drawing?	Penmanship?
Menominee	565	377	331	2	7	....	42	1-3	10	....	5	5	....	....	....
Metamora	105	86	70	1	1	....	43	.....	....	....	....	....	....	....	....
Michigamme	276	245	162	1	2	....	80	.....	....	....	....	....	....	....	....
Middleville	230	224	172	1	3	....	43	.....	3	....	....	....	....	yes	yes
Midland, No. 3	330	279	253	1	5	....	46	1-12	3	....	....	....	....	....	yes
Midland, No. 6	123	100	79	1	1	....	50	.....	....	....	....	....	....	....	....
Millington	198	140	96	2	.....	....	70	.....	....	....	....	....	....	....	....
Monroe	500	338	309	1	7	1	43	1-7	15	3	....	4	yes	....	....
Morenci	476	367	250	1	6	....	44	.....	....	....	....	....	....	....	yes
Morley	114	80	65	1	1	....	56	.....	....	....	....	....	....	....	yes
Moscow	100	71	62	1	1	....	35	.....	....	....	....	....	....	yes	yes
Mount Clemens	626	407	375	1	7	....	50	1-6	....	....	....	....	....	yes	yes
Muskegon	2,770	1,565	1,489	2	39	2	39	5-6	15	....	....	....	yes	....	yes
Napoleon	191	116	97	2	1	....	38	.....	....	....	....	....	yes	....	yes
National Mine	252	235	143	1	2	....	75	.....	....	....	....	....	....	....	....
Negaunee	964	693	542	2	11	....	53	1-2	....	....	....	....	....	....	....
Newaygo	302	285	185	1	3	....	71	1-12	4	....	....	....	yes	yes	yes
New Buffalo	184	121	103	1	2	....	40	1-12	....	....	....	....	yes	....	yes
New Haven	193	164	135	1	2	....	55	.....	....	....	....	....	....	....	....
New Troy	117	106	73	1	1	....	53	.....	....	....	....	....	....	....	....
Niles	1,051	735	685	3	17	1	38	2-3	15	2	2	32	....	....	....
Northville	209	185	170	1	4	....	37	.....	11	....	2	3	....	yes	yes
Norway	419	226	200	1	4	....	40	.....	....	....	....	....	....	....	yes
Okemos	105	79	70	1	1	....	39	.....	....	....	....	....	....	....	....
Onondaga	104	58	50	1	1	....	25	.....	....	....	....	....	....	....	....
Ortonville	113	95	87	1	1	....	55	.....	....	....	....	....	....	....	....
Oscoda	360	318	260	2	3	....	63	1-5	3	....	....	....	....	yes	yes
Osseo	128	95	49	.....	2	....	45	.....	....	....	....	....	....	....	....
Otisville	179	126	100	1	3	....	43	.....	1	....	....	....	....	....	....
Otter Lake	151	131	119	.....	2	....	65	1-4	....	....	....	....	....	....	yes
Ovid	518	272	228	1	6	....	37	1-5	2	....	....	....	....	....	yes
Owosso	868	508	458	3	12	....	33	1-3	30	....	....	11	....	....	....
Palmyra	130	120	108	1	1	....	60	.....	....	....	....	....	....	....	yes
Palo	113	100	85	1	2	....	34	.....	....	....	....	....	....	....	....
Paris Tp., No. 1	92	64	57	.....	2	....	32	.....	....	....	....	....	yes	....	....
Parma	260	207	176	1	3	1	52	.....	....	....	....	....	....	....	....
Petersburg	172	155	107	1	2	....	51	.....	....	....	....	....	....	....	....
Petoskey	834	311	285	1	6	....	44	.....	....	....	....	....	....	....	....
Phœnix	187	184	170	1	2	....	62	.....	....	....	....	....	....	....	....
Pierson	150	83	67	1	1	....	41	.....	....	....	....	....	....	....	....
Pinckney	110	93	80	1	1	....	45	.....	....	....	....	....	....	....	....
Plainwell	333	312	110	1	7	....	40	1-6	3	....	....	....	....	....	yes
Plymouth	316	309	288	1	5	....	52	1-3	13	....	....	8	....	....	yes
Pontiac	1,122	728	706	3	16	....	36	1-2	55	7	20	16	....	....	....
Port Austin	189	128	111	1	2	....	43	.....	....	....	....	....	....	....	....
Port Crescent	160	140	68	.....	2	....	70	.....	....	....	....	....	....	....	yes
Port Hope	150	125	103	1	1	....	62	.....	....	....	....	....	....	....	....
Port Huron	1,993	1,349	1,223	1	25	....	41	3-4	16	....	8	18	....	....	....
Potterville	155	104	78	1	1	....	42	.....	....	....	....	....	....	....	....
Reading	292	165	148	1	3	....	55	.....	7	....	....	5	....	....	....
Republic	375	325	275	.....	.....	....	....	.....	....	....	....	....	....	....	....
Richmond	218	146	131	1	2	....	48	1-12	....	....	....	....	....	....	....
Rochester	284	159	134	1	2	....	53	1-10	....	....	....	....	....	....	....
Rockford	287	192	184	1	3	....	48	.....	8	....	....	....	....	....	yes
Rockland	129	112	87	1	1	....	43	.....	....	....	5	4	....	....	yes
Romeo	458	371	349	1	7	....	50	2-5	26	3	6	15	....	....	....
Saginaw	2,283	1,525	1,443	4	29	....	47	all	25	5	4	500	yes	yes	....
St. Clair	653	409	371	1	10	....	38	1-6	2	....	9	....	....	....	....
St. Johns	681	362	310	1	12	....	30	1-3	15	....	2	6	yes	....	....
St. Joseph	510	475	440	2	10	....	36	1-2	9	....	....	16	yes	....	....

TABLE XVI.—*Continued.*

Districts.	Total enrollment.	Average number belonging.	Average daily attendance.	Number of Men Teachers.	Number of Women Teachers.	Number of Special Teachers.	Ave. No of Pupils to each Teacher.	Portion of Superintendent's Time given to Supervision.	Number of Pupils Studying—				Is Special Instruction given in—		
									Latin.	Greek.	French.	German.	Vocal Music?	Drawing?	Penmanship?
St. Louis	560	430	386	1	8	1	45	1-2	----	----	----	----	----	----	----
Sand Beach	192	169	128	1	2	----	56	------	----	----	----	----	yes	yes	yes
Sanilac Tp., No. 2	97	79	64	1	1	----	39	------	----	----	----	----	----	----	----
Saranac	300	196	157	2	2	----	49	------	----	----	----	----	----	----	yes
Saugatuck	395	241	214	------	5	----	48	------	----	----	----	----	yes	----	yes
Schoolcraft	330	248	235	1	5	----	41	1-4	10	----	----	----	----	----	yes
Shelby	153	152	104	1	2	----	50	------	----	----	----	----	----	----	----
South Haven	389	300	273	1	5	----	50	1-12	----	----	----	----	----	----	----
Spring Lake	540	446	444	1	7	----	58	1-4	2	----	----	----	----	----	----
Springport	142	111	91	1	2	----	37	------	----	----	----	----	----	----	----
Springwells Tp, No. 1	561	430	314	1	5	----	71	1-10	----	----	----	----	----	----	yes
Stanton	657	341	316	------	------	----	----	------	----	----	----	----	----	----	----
Stoneville	154	83	70	1	2	----	27	------	----	----	----	----	----	----	----
Sturgis	436	351	339	1	8	----	45	1-2	6	----	----	12	yes	yes	yes
Tawas City	236	179	102	1	2	----	59	------	4	----	----	----	----	----	yes
Tecumseh	622	375	354	1	10	----	38	1-2	18	----	----	12	----	----	----
Thornville	90	80	69	1	1	----	40	------	----	----	----	----	----	----	----
Three Oaks	251	220	142	1	3	----	54	------	----	----	----	----	----	yes	yes
Traverse City	554	540	521	1	8	----	60	1-4	6	----	----	----	yes	yes	yes
Trenton	364	240	178	------	3	----	80	------	----	----	----	----	----	----	----
Tuscola	136	85	67	1	1	----	40	------	----	----	----	----	----	----	yes
Union City	663	259	236	2	5	----	37	1-6	----	----	----	----	----	----	yes
Vandalia	200	188	169	1	3	----	42	------	8	----	----	----	----	----	----
Vassar	595	250	220	2	4	----	41	1-7	4	----	----	5	----	----	----
Vernon	203	160	131	1	2	----	53	------	----	----	----	----	----	----	----
Vriesland	156	120	90	1	1	----	45	------	----	----	----	----	yes	yes	yes
Wacousta	87	52	47	1	1	----	26	------	----	----	----	----	----	----	----
Washington Tp, No. 2 fl	152	------	69	1	------	----	69	------	----	----	----	----	----	----	----
Watervliet	132	125	72	1	1	----	36	------	----	----	----	----	----	----	----
Watrousville	85	82	63	1	1	----	41	------	----	----	----	----	----	----	yes
Wayland	159	141	118	1	3	----	37	1-10	----	----	----	----	----	----	yes
West Bay City No. 1	599	320	246	1	6	----	44	all	----	----	----	----	----	----	yes
Whitehall	408	237	216	1	5	2	39	1-20	----	----	----	----	yes	yes	yes
White Pigeon	300	250	235	1	5	----	51	1-10	----	----	----	----	yes	yes	yes
White Rock	94	75	55	1	1	----	27	------	----	----	----	----	----	----	----
Williamston	302	231	174	2	3½	----	51	------	----	----	----	----	----	----	yes
Wyandotte	904	631	548	2	11	----	55	1-2	----	----	----	----	----	yes	yes
Ypsilanti	1,135	819	751	4	17	1	40	1-2	42	4	----	18	yes	----	----
Zeeland	283	227	198	1	3	----	57	1-15	----	----	----	----	yes	----	yes
Zilwaukee	423	320	205	2	3	----	----	------	----	----	----	103	----	----	----

TABLE XVII.

Statistics of the High-School Department of Sixty Graded School Districts, Compiled from Reports of Superintendents and Principals, for the School Year 1881-2.

Districts.	Enrollment in Department.	Average Number Belonging.	Average Daily Attendance	Number of Men Teachers.	Number of Women Teachers.	Ave. No. of Pupils to each Teacher.	No. of Non-resident pupils.	Average Age of Class Graduated.		Cost per Capita for Instruction.	Cost per Capita for Incidentals.	Total Cost per Capita for Education.
								Years.	Months.			
Adrian	183	119	114	1	4-6	4	30	22	18	$26 63	$4 43	$31 06
Albion	48	40	38	1	2	1-2	16	30	18	3	24 00	3 26	27 26
Almont	93	63	60	1	1		31	20	16	6	17 48	5 20	22 66
Ann Arbor	498	326	318	6	4		35	285	18	5	26 11	4 27	30 38
Battle Creek	162	112	107	2	1-6	3	21	----	18	2	10 50	4 03	14 53
Blissfield	80	50	40	1			44	26	------	----	12 00	2 56	14 56
Brighton	68	35	32	1		------	32	18	19	----	22 32	3 32	25 64
Burr Oak	70	52	48	1		2-3	31	27	17	----	14 42	2 30	16 72
Cadillac	45	26	25	1		------	26	5	------	----	23 09	3 66	26 75
Caro	108	85	77	1	1	1-2	34	35	19	----	15 67	2 35	18 02
Cassopolis	69	50	48	1	1		25	6	17	----	46 28	8 00	54 28
Central Mine	87	55	44	1		------	55	2	------	----	16 94	3 05	19 99
Centreville	72	64	55	--------	1		55	15	17	----	11 11	3 20	14 31
Chelsea	98	49	43	1	1		24	5	------	----	24 50	9 73	34 23
Constantine	145	120	92	1	2		40	38	17	----	12 29	1 81	14 10
Decatur	159	116	103	1	2		34	55	17	----	15 40	1 71	17 11
Detroit	770	558	545	4	18		27	----	18	----	27 29	4 44	31 73
East Saginaw	171	141	137	2	3		28	7	18	2	30 90	2 91	33 81
East Tawas	60	38	34	1		------	34	4	17	----	21 89	7 20	29 09
Eaton Rapids	115	64	53	1	1		32	30	16	----	16 09	1 67	17 76
Flint	192	128	126	2	3		25	65	18	----	19 88	3 78	23 66
Galesburg	79	54	50	1		------	50	39	16	----	11 05	1 66	12 71
Grand Haven	75	53	49	2		------	25	3	18	6	25 69	4 09	29 78
Grand Rapids	515	373	340	4	3-4	5 1-2	36	67	17	6	23 00	3 41	26 41
Grass Lake	47	30	28	1		1-6	27	21	18	6	26 50	2 63	29 13
Greenville	96	70	68	1	3		20	16	19	----	27 88	3 92	31 80
Hastings	195	101	97	1	1		50	----	19	----	9 66	2 05	11 71
Hillsdale	103	85	81	3-5	2		33	28	18	---	16 86	4 51	21 37
Homer	63	39	36	1	1		16	15	16	----	13 84	2 41	16 25
Houghton	47	36	35	3-5	1		28	3	19	----	45 28	6 66	51 94
Jackson, No. 17	40	31	29	1-2	1		21	----	17	----	33 00	3 83	36 83
Jonesville	50	30	29	1	1		15	17	18	2	17 23	3 94	21 17
Kalamazoo	142	123	116	1	4		25	16	18	10	24 43	3 77	28 20
Manchester	53	37	----	2		1-3	13	25	18	----	12 66	4 26	16 92
Manistee	90	58	55	1	1-3	2	17	1	18	----	38 73	3 23	41 96
Marquette	90	61	57	--------	2		30	2	20	----	33 33	6 79	40 12
Mason	68	42	39	--------	2		19	32	17	6	28 55	2 83	31 38
Mount Clemens	63	43	40	1-2	1		28	----	20	----	25 35	2 66	28 01
Muskegon	64	45	43	1-6	2		32	6	------	----	28 15	3 68	31 83
Newaygo	68	65	40	1		------	65	12	------	----	14 58	35	14 93
New Buffalo	56	32	26	1		------	32	3	10	6	15 38	95	16 33
Niles	108	85	82	2	1-3	1	19	28	17	----	26 83	2 36	30 19
Oscoda	56	63	41	1		------	63	----	15	----	14 00	1 56	15 56
Owosso	69	40	37	2-3		2	15	----	17	----	41 44	4 55	45 99
Pontiac	156	105	103	1	1-2	3	24	63	18	9	24 67	2 85	27 72
Romeo	82	69	64	--------	1		69	59	17	7	15 38	1 40	16 78
Saginaw	117	93	90	1	2		31	6	18	6	22 02	2 00	24 02
St. Clair	60	58	52	1	1		29	16	19	5	22 41	3 52	25 93
St. Johns	60	44	44	1	1		22	22	19	----	24 00	1 00	25 00
St. Louis	70	50	40	1		------	50	10	------	----	13 94	70	14 64
Schoolcraft	69	54	50	1	1		27	22	------	----	17 11	2 83	19 94
Stanton	82	43	41	1		------	43	2	17	----	24 80	3 86	28 66
Sturgis	97	74	71	1-2	2		37	28	18	----	19 99	3 10	23 09
Tecumseh	94	55	53	1	2		18	27	18	----	28 87	4 19	33 06
Vassar	89	46	41	6-7	1		23	13	22	----	26 16	2 14	28 30
Vernon	42	36	32	1		------	33	23	------	----	15 15	45	15 60
Whitehall	47	28	26	1		------	28	6	15	8	24 11	6 85	30 96
White Pigeon	87	75	73	1	1		34	40	18	----	17 81	35	18 16
Wyandotte	48	30	27	1-2	1		33	3	17	----	11 38	1 57	12 93
Ypsilanti	106	83	77	2	1		28	19	------	----	22 56	4 44	27 00

TABLE XVIII.

Statistics of the Grammar Department of Sixty Graded School Districts, Compiled from Reports of Superintendents and Principals, for the School Year 1881-2.

Districts.	Enrollment in Department.	Average Number Belonging.	Average Daily Attendance.	Number of Men Teachers.	Number of Women Teachers.	Average No. of Pupils to each Teacher.	No. of Non-Resident Pupils.	Average Age of Class Promoted		Cost per Capita for Instruction.	Cost Per Capita for Incidentals.	Total Cost Per Capita for Education.
								Years.	Months.			
Adrian	603	370	344	5-12	11	34	17	14	---	$13 57	$4 43	$18 00
Albion	208	163	153	1	3 1-2	43	6	14	1	9 90	3 26	10 16
Almont	65	55	40	.....	1	54	.....	13	3	5 55	5 20	10 75
Ann Arbor	611	457	440	.....	11 1-2	40	59	14	2	12 25	4 27	16 52
Battle Creek	551	390	369	.....	9	39	.....	14	---	10 50	4 03	14 53
Blissfield	58	40	36	.....	1	40	2	---	---	8 09	2 56	10 65
Brighton	121	71	66	.....	2	33	2	13	7	9 43	3 49	12 92
Burr Oak	80	60	54	.....	1 1-3	40	3	13	6	4 00	2 30	6 30
Cadillac	141	70	66	.....	2	35	.....	10	6	10 00	3 66	13 66
Caro	140	107	98	.....	2	53	.....	15	---	5 97	2 35	8 32
Cassopolis	97	81	78	.....	2	40	12	---	---	28 56	4 95	33 51
Central Mine	69	57	48	.....	1	57	.....	---	---	6 89	3 05	9 94
Centreville	36	19	18	.....	1	19	3	13	---	8 30	3 20	11 50
Chelsea	155	85	78	.....	2	42	3	15	---	8 81	1 67	10 48
Constantine	195	95	83	1	1	47	12	12	---	9 52	1 81	11 33
Decatur	76	57	53	.....	2	28	1	12	---	9 20	1 71	10 91
Detroit	6,691	3,557	3,550	4	92	37	.....	14	---	16 59	4 44	21 03
East Saginaw	1,166	870	823	3	18	41	3	14	8	13 26	2 91	16 17
East Tawas	50	36	31	.....	1	36	8	13	---	11 11	7 20	18 31
Eaton Rapids	124	142	109	.....	2	71	4	13	2	4 54	1 67	6 21
Flint	862	614	572	1	16	36	51	14	3	10 59	3 78	14 37
Galesburg	56	38	31	1	.....	38	9	14	---	7 56	1 66	9 22
Grand Haven	300	177	160	2-3	4	41	5	14	2	12 68	4 09	16 77
Grand Rapids	2,508	1,390	1,357	3 1-4	38 1-2	33	38	14	---	10 93	3 41	14 34
Grass Lake	68	48	42	.....	1 1-3	34	7	13	6	8 89	2 63	11 52
Greenville	234	171	167	.....	5	34	3	13	6	12 45	3 92	16 37
Hastings	228	176	158	.....	4	44	10	15	---	6 61	2 05	8 66
Hillsdale	279	259	250	1-5	4	65	5	14	---	5 90	4 51	10 41
Homer	67	44	37	.....	1	37	1	13	---	7 00	2 41	9 41
Houghton	84	66	62	2-5	2	33	2	14	---	20 61	6 66	9 27
Jackson, No. 17	321	183	174	.....	7	26	.....	14	7	14 50	3 83	18 23
Jonesville	115	75	73	1	1	37	10	14	2	15 07	3 94	19 01
Kalamazoo	873	421	393	.....	15	28	7	16	5	14 93	3 77	18 70
Manchester	102	47	40	.....	.....	.....	.....	.....	.....	9 34	2 21	11 55
Manistee	469	233	223	1-3	4 3-10	53	7	14	6	9 29	3 23	12 52
Marquette	384	222	203	.....	4 1-2	50	3	---	---	9 95	6 79	16 74
Mason	163	122	74	.....	2 1-2	49	18	14	---	8 03	2 83	10 86
Mount Clemens	173	114	106	1-2	2	45	2	14	3	7 52	2 66	10 18
Muskegon	351	274	259	.....	6	46	9	---	---	12 75	3 68	16 43
Newaygo	65	60	35	.....	1	60	.....	---	---	5 63	35	5 98
New Buffalo	47	34	31	.....	1	34	.....	---	---	9 22	94	10 16
Niles	189	147	142	1-6	4	36	6	14	---	10 56	3 36	13 92
Oscoda	48	44	36	1	.....	44	.....	12	1	12 00	1 56	13 56
Owosso	215	147	136	.....	4	33	.....	15	---	9 87	4 55	14 42
Pontiac	267	195	190	1 1-4	4	39	28	14	8	12 42	2 85	15 27
Romeo	146	130	126	.....	2	65	5	14	6	8 07	1 40	9 47
Saginaw	477	337	325	1-2	8	40	5	15	---	12 77	2 00	14 77
St. Clair	223	139	130	.....	5	28	12	11	4	10 79	3 52	14 31
St. Johns	188	129	119	.....	4	32	13	14		10 60	1 00	11 00
St. Louis	160	120	108	.....	2 1-2	48	6	15		7 30	70	8 00
Schoolcraft	120	102	97	.....	2	51	12	---		7 11	2 83	9 94
Stanton	147	81	79	.....	2	41	.....	---		8 47	3 86	12 33
Sturgis	181	125	118	3-14	3	42	18	14		9 01	3 10	12 11
Tecumseh	252	158	147	.....	4	40	7	15		9 51	4 19	13 70
Vassar	204	96	85	1 1-4	1	48	2	14	9	7 07	2 14	9 21
Vernon	74	57	45	.....	1	57	1	---		4 39	45	4 84
Whitehall	117	79	73	.....	2	39	.....	11	---	5 65	6 85	12 50
White Pigeon	55	45	42	.....	1	45	4	13	---	6 54	35	6 89
Wyandotte	297	220	189	1	4	44	9	13	6	8 22	1 57	9 80
Ypsilanti	328	250	230	.....	6	42	11	---	---	11 58	4 44	16 02

TABLE XIX.

Statistics of the Primary Department of Sixty Graded School Districts, Compiled from Reports of Superintendents and Principals, for the School Year 1881-2.

Districts.	Enrollment in Department.	Average Number Belonging.	Average Daily Attendance.	Number of Men Teachers.	Number of Women Teachers.	Average No. of Pupils to each Teacher.	No. of Non-Resident Pupils.	Average Age of Class Promoted		Cost Per Capita for Instruction.	Cost Per Capita for Incidentals.	Total Cost Per Capita for Education.
								Years.	Months.			
Adrian	935	554	513	1-2	15	37	1	10	----	$9 63	$4 43	$14 06
Albion	345	250	233	1	6	35	4	10	6	8 19	3 26	11 45
Almont	81	60	47	.....	1	60	5	9	----	5 00	5 20	10 20
Ann Arbor	1,000	701	664	.....	14	50	51	10	----	8 46	4 27	12 73
Battle Creek	1,100	514	491	.....	14	35	.....	10	2	10 50	4 03	14 53
Blissfield	102	79	50	.....	1	79	.....	----	----	5 39	2 56	7 95
Brighton	134	77	69	.....	2	38	2	9	4	7 83	3 24	11 07
Burr Oak	100	80	71	.....	2	40	2	9	----	4 50	2 30	6 80
Cadillac	297	189	175	.....	3	63	.....	----	----	5 55	3 66	9 21
Caro	198	172	158	.....	2 1-5	78	.....	11	----	2 15	2 35	4 50
Cassopolis	106	76	65	.....	2	38	27	8	----	30 50	5 26	35 76
Central Mine	82	60	40	.....	1	60	.....	----	----	6 58	3 05	9 63
Centreville	114	115	58	.....	2	57	5	9	----	5 02	3 20	8 22
Chelsea	241	145	130	.....	3	45	.....	----	----	7 14	1 67	8 81
Constantine	164	115	91	1	2	57	2	----	----	8 49	1 81	10 30
Decatur	161	113	105	.....	2	52	2	8	----	4 30	1 71	6 01
Detroit	18,206	8,755	8,166	1	149	59	.....	10	----	10 07	4 44	14 51
East Saginaw	2,273	1,589	1,482	.....	32	49	1	10	3	9 45	2 91	12 36
East Tawas	258	131	119	.....	2	65	10	11	----	6 11	7 20	13 31
Eaton Rapids	242	180	167	.....	4	45	.....	10	6	5 22	1 67	7 89
Flint	1,102	625	587	.....	15	43	1	10	4	9 59	3 78	13 37
Galesburg	126	88	72	.....	2	44	3	10	----	5 38	1 66	7 04
Grand Haven	1,403	650	585	3-4	11.6	56	3	10	8	6 83	4 09	10 92
Grand Rapids	5,883	2,687	2,513	2	70	38	22	10	----	13 00	3 41	16 41
Grass Lake	102	60	50	.....	1 2-3	36	.....	11	6	7 12	2 63	9 75
Greenville	471	287	271	.....	6.3	45	2	9	5	8 88	3 92	12 80
Hastings	343	227	208	.....	5	47	.....	10	6	6 63	2 05	8 68
Hillsdale	345	310	295	1-5	6	52	.....	10	----	6 00	4 51	10 51
Homer	146	99	86	.....	2	49	9	----	----	6 00	2 41	8 41
Houghton	631	484	440	1 4-15	8	60	3	11	----	11 03	6 66	17 69
Jackson, No. 17	1,141	543	496	.....	11	49	.....	10	3	6 33	3 83	10 16
Jonesville	167	100	94	.....	2	50	.....	10	8	12 82	3 94	16 76
Kalamazoo	2,126	941	878	.....	25	37	1	12	2	9 78	3 77	13 55
Manchester	158	136	120	2 1-3	.....	58	1	11	----	5 78	1 42	7 20
Manistee	1,166	559	529	1-3	12	46	4	10	6	9 50	3 23	12 73
Marquette	971	565	511	.....	8 1-2	66	9	----	----	6 41	6 79	13 20
Mason	305	128	118	.....	4	32	.....	9	----	7 51	2 83	10 34
Mount Clemens	390	249	228	.....	4	62	.....	10	3	5 29	2 66	7 95
Muskegon	2,272	1,211	1,151	.....	31	.....	3	----	----	10 75	3 68	14 43
Newaygo	169	160	90	.....	2	80	.....	----	----	3 72	35	4 07
New Buffalo	81	54	45	.....	1	54	.....	----	----	4 70	94	5 64
Niles	754	502	457	1-2	11	45	.....	11	----	7 75	3 36	11 11
Oscoda	256	201	183	.....	3	67	.....	9	----	7 00	1 56	8 56
Owosso	584	321	285	2	6	40	.....	10	6	7 99	4 55	12 54
Pontiac	699	427	412	1-4	10	42	5	11	6	8 56	2 85	11 41
Romeo	230	172	159	.....	4	43	1	11	5	7 84	1 40	9 24
Saginaw	1,668	1,095	1,028	1 1-2	19	54	1	11	----	7 87	2 00	9 87
St. Clair	350	212	189	.....	4	53	4	8	2	5 66	3 52	9 18
St. Johns	433	189	147	.....	7	27	3	10	9	12 50	1 00	13 50
St. Louis	300	260	238	.....	5	52	4	11	----	6 54	70	7 24
Schoolcraft	141	92	88	.....	2	46	.....	----	----	6 49	2 83	9 32
Stanton	428	187	196	.....	4	46	.....	----	----	7 50	3 86	11 36
Sturgis	218	152	150	2-7	3	50	7	10	----	7 87	3 10	10 97
Tecumseh	276	162	154	.....	4	41	.....	11	----	7 77	4 19	11 96
Vassar	302	108	94	1-14	2	54	.....	11	----	5 76	2 14	7 90
Vernon	87	70	54	.....	1	70	2	----	----	3 57	45	4 02
Whitehall	244	130	121	.....	3	43	.....	7	6	4 06	6 85	10 91
White Pigeon	158	130	120	.....	3	52	5	9	----	5 60	35	5 95
Wyandotte	559	372	332	.....	2	62	.....	9	4	5 53	1 57	7 10
Ypsilanti	701	486	444	2	10	40	2	----	----	11 47	4 44	15 91

TABLE XX.

Enrollment at Teachers' Institutes for the Calendar Year 1882.

Counties.	Conductors.	Number Enrolled.			Kinds and Grades of Certificates held by Members.						No. without experience in teaching.	No. having received Normal School instruction.	Average attendance each half-day.
		Men.	Women.	Total.	State.	Normal.	First.	Second.	Third.	Special.			
Allegan:													
Douglas	Lewis McLouth	12	59	71	....	3	1	2	30	2	32	13	45.3
Wayland	P. A. Latta	30	88	118	....	....	1	8	54	6	49	71	103.4
Alpena	D. Howell	6	21	27	....	....	....	6	9	....	5	1	14
Antrim	J. R. Miller	10	39	49	....	....	1	5	28	....	15	13	28.6
Baraga	O. D. Thompson	4	16	20	....	2	....	....	4	....	11	3	15
Barry	C. B. Hall	17	47	64	....	....	2	7	38	....	20	11	52
Bay	W. H. Payne	19	101	120	1	1	25	31	31	....	28	42	74
Benzie	P. A. Latta	12	25	37	....	....	4	6	17	1	9	7	28.4
Berrien	C. F. R. Bellows	24	101	125	1	1	17	12	78	....	23	35	67
Branch	W. S. Perry	52	101	153	1	....	13	24	77	2	31	36	107
Calhoun	Daniel Putnam	30	139	169	....	....	15	20	92	10	40	27	128.3
Cass	J. Estabrook	23	85	108	....	3	6	7	59	2	31	25	86
Charlevoix	P. A. Latta	9	23	32	....	....	2	1	22	....	7	4	26.9
Cheboygan	N. H. Walbridge	10	31	41	....	....	5	4	12	....	20	7	27
Chippewa	Chas. Kelsey	12	22	34	....	....	6	6	9	2	11	5	14
Clare	H. C. Rankin	12	31	43	....	1	1	7	14	....	20	8	30
Clinton	E. P. Church	24	44	68	2	1	7	16	35	2	6	20	45
Crawford	C. F. R. Bellows	6	9	15	....	1	....	....	5	....	7	2	10
Eaton	Austin George	44	116	160	....	3	8	2	97	....	50	20	123
Emmet	Lewis McLouth	8	36	44	....	....	6	5	25	2	6	9	33
Genesee	W. H. Payne	25	46	71	....	1	2	6	47	1	14	11	43
G. Traverse	C. F. R. Bellows	12	65	77	....	....	2	9	50	....	16	44	61
Gratiot	P. A. Latta	36	53	89	....	....	5	8	58	1	17	14	69
Hillsdale	E. Olney	37	95	132	1	1	14	13	71	4	25	40	59.5
Huron	M. T Gass	14	39	53	....	1	3	9	18	....	20	11	39
Ingham	J. Estabrook	33	139	172	....	5	6	7	105	2	44	18	108
Ionia	C. I. Bemis	40	87	127	2	1	1	8	89	3	18	35	70
Iosco	H King	10	20	30	1	1	1	5	9	1	9	7	18
Isabella	J. Estabrook	19	63	82	....	3	4	5	46	3	19	9	70
Jackson	Lewis McLouth	28	80	108	....	7	2	3	64	1	32	34	80.2
Kalamazoo	Z. C. Spencer	30	110	140	3	....	5	7	82	2	27	42	82.3
Kalkaska	H. King	19	45	64	....	....	4	8	15	5	.....	10	38
Kent	I. N. Demmon	33	87	120	....	3	7	8	57	1	40	21	84.1
Lake	N. H. Walbridge	12	23	35	....	....	6	6	19	....	4	4	23.5
Lapeer	C. F. R. Bellows	37	66	103	1	....	10	12	60	....	20	21	66
Leelanaw	R. W. Putnam	12	15	27	....	....	2	6	10	....	6	15	18
Lenawee	E. G. Walker	63	184	247	....	2	19	33	110	....	83	72	192
Livingston	E. Olney	42	90	132	1	1	7	6	74	7	34	34	52
Mackinac	D. Putnam	5	8	13	....	....	3	1	5	....	2	.....	9.4
Macomb	E. P. Church	27	94	121	....	....	9	5	92	3	16	5	101
Manistee	J. W. Ewing	10	53	63	....	21	8	4	24	1	23	8	48
Mason	I. N. Demmon	11	37	48	....	....	5	15	22	1	9	6	39
Mecosta	J. S. Crombie	24	57	81	....	....	6	8	44	3	17	17	50
Menominee	J. S. Crombie	6	19	25	....	1	2	3	8	3	11	3	13
Midland... Gladwin	Lewis McLouth	5	45	50	....	....	3	7	26	1	14	5	40.1
Missaukee	J. S. Crombie	15	12	27	....	....	4	5	10	....	7	3	21.2
Monroe	H. R. Pattengill	28	69	97	....	....	17	8	53	....	19	17	63
Montcalm	W. H. Utley	23	51	74	....	....	....	....	.....	.....	.....	.....	47.5
Muskegon	Z. C. Spencer	22	30	52	....	....	8	6	14	1	20	9	35
Newaygo	Tyson Smith	15	55	70	....	1	2	2	15	4	13	15	.....
Oakland	W. H. Payne	41	109	150	....	2	5	13	103	1	26	53	95
Oceana	P. A. Latta	19	39	58	1	....	1	8	35	4	9	10	46
Ontonagon	J. S. Crombie	6	23	29	....	2	3	3	12	....	10	3	21
Osceola	P. A. Latta	16	46	62	1	....	4	4	36	2	15	12	37
Otsego	T. W. Crissey	12	12	24	....	1	....	....	13	....	2	3	14.2
Ottawa	Z. C. Spencer	29	86	115	1	....	12	12	64	....	26	8	78.2
Presque Isle	P. A. Latta	20	2	22	....	....	....	3	2	....	17	.....	8.3
Saginaw	I. N. Demmon	17	64	81	1	....	5	3	55	2	15	11	62
Sanilac	J. Estabrook	48	67	115	1	....	10	13	30	2	36	10	76
Shiawassee	Lewis McLouth	32	75	107	....	1	5	3	54	13	30	26	61.3
Saint Clair	J. Estabrook	23	71	94	....	1	12	10	55	1	15	15	80
Saint Joseph	J. G. Plowman	41	120	161	....	3	14	10	100	1	30	34	127.2
Tuscola	R. W. Putnam	41	73	114	1	2	16	15	55	....	74	46	80
Van Buren	Austin George	32	84	116	1	3	14	10	64	....	31	24	74
Washtenaw	I. N. Demmon	41	77	118	....	3	2	6	72	1	33	14	93
Wayne	O. B. Thomas	31	77	108	2	5	11	9	43	1	15	27	74
Wexford	H. R. Pattengill	24	40	64	....	....	7	5	22	1	29	12	47
Totals....68		1,510	4,036	5,566	23	88	406	520	2,818	106	1,413	1,199	54 6

TABLE XXI.

Receipts and Expenditures at Teachers' Institutes for the Calendar Year 1882.

Counties.	Where Held.	Dates.	Receipts.			Expenditures.		
			County Fund.	State Appropriation.	Total.	Paid Instructors.a	Other Expenses.	Total.
Allegan	Douglas	Apr. 10–Apr. 14	$163 07		$163 07	$114 15	$48 92	$163 07
Allegan	Wayland	Oct. 30–Nov. 3	132 10		132 10	105 30	26 80	132 10
Alpena	Alpena	Aug. 14–Aug. 19	24 00	$60 00	84 00	76 46	7 54	84 00
Antrim	Bellaire	Aug. 28–Sept. 1	42 50	60 00	102 50	90 33	12 17	102 50
Baraga	L'Anse	Aug. 14–Aug. 18	10 00	60 00	70 00	56 92	13 08	70 00
Barry	Nashville	Aug. 14–Aug. 19	164 50		164 50	134 20	30 30	164 50
Bay	Bay City	Mar. 27–Mar. 31	89 50	57 35	146 85	106 95	39 90	146 85
Benzie	Benzonia	Sept. 11–Sept. 15	36 00	50 00	86 00	72 50	13 50	86 00
Berrien	Niles	Aug. 14–Aug. 18	157 15		157 15	126 75	30 40	157 15
Branch	Quincy	Aug. 21–Aug. 25	161 15		161 15	110 65	50 50	161 15
Calhoun	Marshall	Mar. 27–Mar. 31	164 80		164 80	127 30	37 50	164 80
Cass	Edwardsburg	Aug. 14–Aug. 18	114 50		114 50	86 28	28 22	114 50
Charlevoix	Boyne City	June 20–June 23	45 00	60 00	105 00	97 25	7 75	105 00
Cheboygan	Cheboygan	Aug. 21–Aug. 25	27 50	60 00	87 50	77 28	9 62	87 50
Chippewa	Sault Ste. Marie	Aug. 7–Aug. 11	16 23	60 00	76 23	70 17	6 06	76 23
Clare	Clare	Aug. 14–Aug. 18	35 50	60 00	95 50	80 65	14 85	95 50
Clinton	St. Johns	Aug 28–Sept. 1	137 40		137 40	104 15	33 25	137 40
Crawford	Grayling	Oct. 2–Oct. 6	34 50	35 00	69 50	62 00	7 50	69 50
Eaton	Charlotte	Mar. 27–Mar. 31	151 50		151 50	109 30	42 20	151 50
Emmet	Petoskey	July 10–July 14	35 50	60 00	95 50	64 30	31 20	95 50
Genesee	Clio	Oct. 2–Oct 6	150 14		150 14	112 00	38 14	150 14
G'd Traverse	Traverse City	Aug. 28–Sept. 1	39 00	50 00	89 00	74 67	14 33	89 00
Gratiot	St. Louis	Aug 28—Sept. 1	130 00		130 00	110 30	19 70	130 00
Hillsdale	Hillsdale	Aug. 28-Sept. 1	179 00		179 00	126 15	52 85	179 00
Huron	Port Hope	Aug. 28-Sept. 1	59 00	40 00	99 00	81 71	17 29	99 00
Ingham	Mason	Mar. 27–Mar. 31	152 80		152 80	121 00	31 80	152 80
Ionia	Ionia	Oct. 23–Oct. 26	179 66		179 66	138 70	40 96	179 66
Iosco	Au Sable	Aug. 28–Sept. 1	31 50	60 00	91 50	83 93	7 57	91 50
Isabella	Mt. Pleasant	Aug. 28–Sept. 1	68 50	40 00	108 50	87 50	21 00	108 50
Jackson	Parma	Aug. 21–Aug 25	189 11		189 11	156 95	32 16	189 11
Kalamazoo	Kalamazoo	Aug. 21–Aug. 25	234 90		234 90	191 80	43 10	234 90
Kalkaska	Kalkaska	Aug. 21–Aug. 25	76 00	60 00	136 00	116 87	19 13	136 00
Kent	Lowell	Apr. 3–Apr. 7	152 35		152 35	109 45	42 90	152 35
Lake	Chase	Sept. 25–Sept. 29	51 00	50 00	101 00	88 80	12 20	101 00
Lapeer	Lapeer	Apr. 3–Apr. 7	155 62		155 62	109 55	46 07	155 62
Leelanaw	Sutton's Bay	July 31–Aug. 4	37 00	60 00	97 00	90 80	6 20	97 00
Lenawee	Adrian	Mar. 27–Mar. 31	175 60		175 60	122 33	46 27	175 60
Livingston	Fowlerville	Aug. 21–Aug. 25	145 59		145 59	108 19	37 40	145 59
Mackinac	Mackinac	July 5–July 8	18 50	60 00	78 50	67 25	11 25	78 50
Macomb	Armada	Aug. 21–Aug. 25	104 50	27 86	132 36	116 41	15 95	132 36
Manistee	Manistee	Apr. 3–Apr. 7	60 50	50 00	110 50	95 00	15 50	110 50
Mason	Ludington	Sept. 11–Sept. 15	56 00	50 00	106 00	84 15	21 85	106 00
Mecosta	Big Rapids	Oct. 16–Oct. 20	55 00	35 00	90 00	70 66	19 34	90 00
Menominee	Spalding	Aug. 21–Aug. 25	14 00	60 00	74 00	67 70	6 30	74 00
Midland / Gladwin	Midland	Aug. 28–Sept. 1	38 50 / 10 00	50 00	98 50	86 15	12 35	98 50
Missaukee	Lake City	Apr 3–Apr. 7	35 50	60 00	95 50	81 06	14 44	95 50
Monroe	Monroe	Aug. 28-Sept. 1	138 00		138 00	122 25	15 75	138 00
Montcalm	Greenville	Aug. 14–Aug. 18	132 50	41 84	174 34	132 15	42 19	174 34
Muskegon	Trent	Aug. 28–Sept. 1	59 50	50 00	109 50	82 50	27 00	109 50
Newaygo	Newaygo	Oct. 23–Oct. 27	86 00	10 00	96 00	64 25	31 75	96 00
Oakland	Pontiac	Aug. 21–Sept. 2	258 00		258 00	179 41	78 59	258 00
Oceana	Hart	Oct. 9–Oct. 13	78 50	28 14	106 64	91 37	15 27	106 64
Ontonagon	Rockland	Aug. 28–Sept. 1	20 50	60 00	80 50	73 88	6 62	80 50
Osceola	Hersey	Oct. 23–Oct. 27	55 50	25 81	81 31	68 06	13 25	81 31
Otsego	Gaylord	July 24–July 28	38 50	60 00	98 50	88 50	10 00	98 50
Ottawa	Spring Lake	Mar. 27–Mar. 30	198 90		198 90	162 30	36 60	198 90
Presque Isle	Rogers City	June 27–June 30	14 50	60 00	74 50	59 75	14 75	74 50
Saginaw	Saginaw	Aug. 21–Aug. 25	152 00		152 00	124 50	27 50	152 00
Sanilac	Lexington	Apr. 3–Apr. 7	141 60		141 60	114 40	27 20	141 60
Shiawassee	Owosso	Oct. 16–Oct. 20	132 50		132 50	104 15	28 35	132 50
St Clair	Brockway Center	Aug. 21–Aug. 25	137 50	5 00	142 50	109 70	32 80	142 50
St. Joseph	White Pigeon	Aug. 21–Aug. 25	150 00		150 00	118 90	31 10	150 00
Tuscola	Vassar	Aug. 21–Aug. 25	118 50	24 00	142 50	116 90	25 60	142 50
Van Buren	Paw Paw	Aug. 21–Aug. 25	140 75		140 75	108 50	32 25	140 75
Washtenaw	Chelsea	Aug. 28-Sept. 1	143 25		143 25	113 45	29 80	143 25
Wayne	Wayne	Aug. 28-Sept. 1	159 90		159 90	123 49	36 41	159 90
Wexford	Manton	Mar. 27–Mar. 31	47 50	60 00	107 50	92 75	14 75	107 50
Totals			$6,745 57	$1,800 00	$8,545 57	$6,830 73	$1,714 84	$8,545 57

a Including both compensation and expenses.

TABLE XXII.

General Statistics of State and Incorporated Educational Institutions, Compiled from the Reports of Officers for the Academic Year 1881-2.

Name of Institution.	Location.	Date of Charter or Organization.	Religious Denomination.	Name of Principal, President, or Superintendent.	No. of Instructors.	No. of Students [or Inmates] during Year.	No. of Graduates at Last Commencement.	Whole No. of Graduates since Founded.	No. of Volumes in Library.	No. of Volumes added to Library during Year.
State:										
University of Michigan	Ann Arbor	1841	Non-sectarian	James B. Angell	59	1,534	435	7,570	41,200	2,700
State Agricultural College	Lansing	1855	Non-sectarian	T. C. Abbot	12	216	28	272	7,335	1,100
State Normal School	Ypsilanti	1852	Non-sectarian	D. Putnam	12	511	81	1,015	4,201	1,080
Institution for the Deaf and Dumb	Flint	1854	Non-sectarian	D. H. Church	14	249	4	86	1,558	4
School for the Blind	Lansing	1880	Non-sectarian	J. F. McElroy	7	63	4	9	925	885
State Reform School	Lansing	1856	Non-sectarian	C. A. Gower	7	543	.....	.....	956	150
Michigan Reform School for Girls	Adrian	1881	Non-sectarian	Miss Emma A. Hall	4	85	.....	.....	179	129
Public School for Dependent Children	Coldwater	1874	Non-sectarian	Lyman P. Alden	6	434	.....	.....	1,200	.....
Incorporated:										
Adrian College	Adrian	1859	Methodist Protestant	D. S. Stephens	14	222	12	229	3,100	100
Albion College	Albion	1861	Methodist Episcopal	L. R. Fiske	12	280	10	156	3,600	100
Battle Creek College	Battle Creek	1874	Seventh Day Adventist	*a*	*a*	*a*	*a*	*a*	*a*	*a*
Detroit College	Detroit	1881	Roman Catholic	James G. Walshe	9	148	.....	.....	3,500	150
Grand Traverse College	Benzonia	1863	Congregational	N. P. Willard	8	59	.....	.....	300	.....
Hillsdale College	Hillsdale	1855	Free-Will Baptist	D. W. C. Dergin	15	816	22	488	6,206	206
Hope College	Holland	1866	Reformed Church in America	Charles Scott	7	91	9	98	5,560	730
Kalamazoo College	Kalamazoo	1855	Baptist	Kendall Brooks	7	159	4	135	3,180	139
Olivet College	Olivet	1859	Congregational and Presbyterian	H. Q. Butterfield	13	329	18	159	10,000	1,200
Michigan Female Seminary	Kalamazoo	1856	Presbyterian	Miss M. H. Sprague	7	45	2	80	910	110
Michigan Military Academy	Orchard Lake	1877	Non-sectarian	J. Sumner Rogers	6	116	12	33	3 0	.....
Monroe Young Ladies' Seminary	Monroe	1850	Non-sectarian	C. N. Mattoon	3	31	.....	141	757	.....
Raisin Valley Seminary	Adrian	1863	Friends	W. W. White	4	95	1	47	350	15
Somerville School	St. Clair	1880	Non-sectarian	Mrs. C. F. Ballentine	7	65	.....	.....	1,000	233
Spring Arbor Seminary	Spring Arbor	1874	Free Methodist	Clark Jones	4	130	6	8	.....	.....

a No report received for 1881-2.

TABLE XXIII.

Financial Statistics of State and Incorporated Educational Institutions, Compiled from the Reports of Officers for the Academic Year 1881-2.

Institutions.	Annual Cost of Tuition per Student.	Av. Cost of Board per Week.	Total Average Annual Cost per Student (to the Stude't).	Total Average Annual Cost per Student, (to the State).	Estimated Value of Grounds, Buildings, Apparatus, etc.	Amount of Productive Funds.	Income from Productive Funds.	Amount of Legislative Appropriation for Year 1882.	Receipts from Tuition Fees during Year.	Receipts from all other Sources.	Current Expenses for the Year.	Expenses for Permanent Improvements.	Liabilities.
State:													
University of Michigan	*a*	*a*	*a*	*a*	$808,036 61	$543,317 66	$38,357 43	$86,000 00	$85,979 10	$41,362 49	$125,207 30	$50,676 79	.....
State Agricultural College	*a*	$3 06	*a*	*a*	338,471 55	367,117 24	22,629 65	21,536 62	*a*	*a*	*a*	50,000 00	.....
State Normal School	$10 00	3 00	140 00	$50 20	139,245 00	69,126 04	4,322 42	19,500 00	2,025 00	390 00	25,650 72	25,000 00	.....
Institution for the Deaf and Dumb	26 52	1 25	.....	170 00	437,122 62	.....	.....	40,000 00	400 00	4,672 76	46,589 74	*a*	.....
School for the Blind	.....	1 58	.....	351 27	91,357 00	.....	.....	18,500 00	.....	*a*	22,140 32	19,728 81	.....
State Reform School	.....	.....	.....	100 00	200,915 57	.....	.....	110,500 00	.....	8,857 77	56,020 36	24,593 99	.....
Michigan Reform School for Girls	.....	.....	.....	*a*	95,675 00	.....	.....	*a*	.....	*a*	*a*	*a*	.....
Public School for Dependent Children	.....	.....	.....	*a*	187,000 00	.....	.....	36,000 00	.....	*a*	36,463 77	3,500 00	.....
Incorporated:													
Adrian College	28 50	2 00	.....	.....	100,000 00	80,000 00	5,000 00	.....	4,000 00	3,000 00	12,000 00	500 00	$30,000 00
Albion College	Free.	2 00	.....	.....	60,000 00	170,000 00	18,000 00	.....	.....	.....	17,500 00	600 00	15,000 00
Battle Creek College	*a*	*a*	.....	.....	*a*	*a*	*a*	.....	*a*	*a*	*a*	*a*	*a*
Detroit College	40 00	.....	.....	.....	58,000 00	.....	.....	.....	4,300 00	.....	4,100 00	350 00	2,400 00
Grand Traverse College	15 00	2 00	.....	.....	10,000 00	10,000 00	750 00	.....	300 00	275 00	1,125 00	75 00	1,000 00
Hillsdale College	.....	2 00	.....	.....	86,973 37	132,160 18	10,997 37	.....	3,447 17	4,311 06	12,733 05	.....	.....
Hope College	15 00	2 50	.....	.....	45,000 00	74,224 48	3,757 11	.....	1,135 75	27,396 17	8,088 76	.....	1,000 00
Kalamazoo College	18 00	3 00	.....	.....	100,000 00	48,670 90	3,105 60	.....	3,342 33	3,969 51	8,877 36	.....	10,494 33
Olivet College	21 00	2 00	.....	.....	104,000 00	132,824 00	8,299 30	.....	5,844 47	5,345 28	20,520 31	4,840 00	7,699 92
Michigan Female Seminary	*b*175 00	.....	.....	.....	50,000 00	.....	.....	.....	7,243 48	.....	7,043 48	200 00	.....
Michigan Military Academy	*b*350 00	.....	.....	.....	50,000 00	.....	.....	.....	.....	.....	.....	.....	.....
Monroe Young Ladies' Seminary	40 00	5 00	.....	.....	8,000 00	.....	.....	.....	2,200 00	.....	1,350 00	1,500 00	.....
Raisin Valley Seminary	20 00	2 00	.....	.....	10,000 00	25,000 00	1,500 00	.....	1,400 00	250 00	3,000 00	100 00	.....
Somerville School	*b*300 00	.....	.....	.....	30,000 00	.....	.....	.....	13,500 00	.....	16,000 00	.....	2,500 00
Spring Arbor Seminary	.....	2 00	.....	.....	12,000 00	.....	.....	.....	1,240 00	4,800 60	1,240 00	6,000 00	500 00

a Not reported. *b* Including board.

TABLE XXIV.

Members of County Boards of School Examiners for the Year 1882-3.

County.	Names.	Occupations.	Postoffice Addresses.	Years when Terms Expire.
Alcona	R. N. Marble, chairman	Lawyer	Harrisville	1882
	J. E. Fair, secretary	Co. Treasurer	Harrisville	1883
	D. McGregor	Merchant	Harrisville	1884
Allegan	J. F. Taylor, chairman	Farmer	Douglas	1883
	P. A. Latta, secretary	Lawyer	Allegan	1884
	J. W. Humphrey	Teacher	Wayland	1885
Alpena	F. S. Dewey, chairman	Merchant	Alpena	1883
	E. L. Little, secretary	Clergyman	Alpena	1885
	A. R. McDonald	Lawyer	Alpena	1884
Antrim	S. W. Skeels, chairman	Teacher	Alba	1884
	Mrs. M. M. Kellogg, secretary	Teacher	Mancelona	1883
	L. M. Belden	Clergyman	Elk Rapids	1885
Baraga	James Bendry, chairman	Brickmaker	Baraga	1883
	E. L. Mason, secretary	Banker	L'Anse	1884
	O. J. Foote	County Clerk	L'Anse	1885
Barry	T. B. Diamond, chairman	Teacher	Bellevue	1884
	M. L. Cook, secretary	Editor	Hastings	1883
	C. B. Hall	Teacher	Hastings	1885
Bay	M. R. Hartwell, chairman	Teacher	Pinconning	1884
	J. H. Sharpe, secretary	Teacher	Essexville	1883
	J. J. Decker	Teacher	Standish	1885
Benzie	Mrs. Rose Woodward, chairm'n	Housekeeper	Frankfort	1884
	A. L. Gridley, secretary	Clergyman	Benzonia	1883
	D. F. Holden	Farmer	Oviatt	1885
Berrien	C. B. Groat, chairman	Teacher	Niles	1884
	H. C. Crosby, secretary	Teacher	New Buffalo	1883
	J. C. Lawrence	Teacher	Benton Harbor	1885
Branch	C. C. Lake, chairman	Farmer	Union City	1883
	M. D. Campbell, secretary	Lawyer	Quincy	1884
	H. J. Cook	Clergyman	Coldwater	1885
Calhoun	H. H. Hubbard, chairman	Agent	Battle Creek	1883
	Ephraim Marble, secretary	Farmer	Marshall	1884
	Miss Arletta R. Camburn	Teacher	Albion	1885
Cass	D. B. Ferris, chairman	Teacher	Cassopolis	1884
	M. Pemberton, secretary	Teacher	Vandalia	1883
	C. A. Mosher	Teacher	Cassopolis	1885
Charlevoix	A. W. Chew, chairman	Farmer	Burgess	1884
	John Redpath, secretary	Clergyman	Boyne Falls	1883
	William Harris	Farmer	Norwood	1885
Cheboygan	Frank Shepard, chairman	Lawyer	Cheboygan	1883
	A. M. Gerow, secretary	Physician	Cheboygan	1884
	D. C. Galbraith	Teacher	Cheboygan	1885
Chippewa	E. S. B. Sutton, chairman	Lawyer	Sault Ste. Marie	1884
	Thomas Ryan, secretary	Farmer	Sault Ste. Marie	1883
	G. L. Trempe	Merchant	Sault Ste. Marie	1885
Clare	T. W. Averill, chairman	Book-keeper	Harrison	1884
	D. E. Alward, secretary	Editor	Clare	1883
	O. J. Cummins	Lawyer	Farwell	1885
Clinton	L. F. Conrad, chairman	Farmer	Wacousta	1883
	W. H. Brunson, secretary	Teacher	St. Johns	1884
	S. W. Baker	Teacher	Ovid	1885
Crawford	William Putnam, chairman	Clergyman	Grayling	1884
	W. A. Masters, secretary	Postmaster	Grayling	1883
	S. Revell	Farmer	Roscommon	1885

TABLE XXIV.—*Continued.*

Counties.	Names.	Occupations.	Postoffice Addresses.	Years when Terms Expire.
Delta	W. H. Tibbals, chairman	Teacher	Escanaba	1883
	A. R. Northup, secretary	Lawyer	Escanaba	1885
	Herman Winde	Farmer	Brampton	1884
Eaton	K. Kittridge, chairman	Editor	Eaton Rapids	1883
	Joseph Estabrook, secretary	Teacher	Olivet	1884
	J. L. Wagner	Teacher	Grand Ledge	1885
Emmet	A. L. Deuel, chairman	Lawyer	Harbor Springs	1883
	W. S. Potter, secretary	Clergyman	Petoskey	1884
	J. L. Morrice	Farmer	Harbor Springs	1885
Genesee	G. F. Brown, chairman	Clerk	Swartz Creek	1885
	E. D. Black, secretary	Teacher	Davison Station	1884
	A. E. Ransom	Editor	Flushing	1883
Gladwin	Thomas Bowers, chairman	Lumberman	Edenville	1883
	C. C. Foutch, secretary	Lawyer	Gladwin	1885
	W. H. Cole	Farmer	Gladwin	1884
Gr'd Traverse	S. G. Burkhead, chairman	Teacher	Traverse City	1883
	C. J. Kneeland, secretary	Physician	Traverse City	1885
	H. G. Reynolds	Farmer	Old Mission	1884
Gratiot	N. A. Richards, chairman	Teacher	St. Louis	1883
	I. N. Cowdry, secretary	Farmer	Pompeii	1884
	G. T. Brown	Lawyer	Ithaca	1885
Hillsdale	C. R. Coryell, chairman	Farmer	Jonesville	1883
	W. A. Drake, secretary	Teacher	Hillsdale	1884
	A. E. Masters	Teacher	Cambria	1885
Houghton	W. B. Northup, chairman	Book-keeper	Hancock	1883
	S. E. Whitney, secretary	Teacher	Hancock	1885
	C. H. Niles	Physician	Calumet	1884
Huron	DeVere Hall, chairman	Teacher	Caseville	1884
	G. A. Maywood, secretary	Editor	Bad Axe	1883
	E. P. Greene	Editor	Port Hope	1885
Ingham	J. J. Calkins, chairman	Lawyer	Leslie	1884
	W. A. Rowe, secretary	Farmer	Mason	1883
	A. R. Hardy	Teacher	Pine Lake	1885
Ionia	J. H. Tibbitts, chairman	Farmer	Ionia	1883
	J. W. Ewing, secretary	Teacher	Ionia	1885
	C. L. Bemis	Teacher	Portland	1884
Iosco	D. E. Gulley, chairman	Surveyor	Tawas City	1883
	C. M. Joslin, secretary	Merchant	East Tawas	1885
	C. R. Henry	Lawyer	Au Sable	1884
Isabella	L. C. Griffith, chairman	County Clerk.	Mount Pleasant	1884
	Free Estee, secretary	Lawyer	Mount Pleasant	1883
	M. Devereaux	Lawyer	Mount Pleasant	1885
Jackson	Eugene Miller, chairman	Teacher	Grass Lake	1883
	D. E. Haskins, secretary	Teacher	Concord	1884
	D. C. Pierce	Teacher	Brooklyn	1885
Kalamazoo	G. T. Hall, chairman	Farmer	Portage	1884
	Ashley Clapp, secretary	Teacher	Vicksburg	1883
	Alexander Haddock	Teacher	Kalamazoo	1885
Kalkaska	J. W. Morley, chairman	Farmer	Kalkaska	1883
	C. C. Jencks, secretary	Lawyer	Kalkaska	1885
	Warren Douglas	Farmer	Lodi	1884
Kent	E. A. Fletcher, chairman	Teacher	Grand Rapids	1883
	G. A. Ranney, secretary	Farmer	Cannonsburg	1884
	W. M. Chapman	Teacher	Lowell	1885
Keweenaw	J. C. Dunstan, chairman	Teacher	Central Mine	1883
	F. H. Coe, secretary	Teacher	Phœnix Mine	1885
	Marshall Brinton	Contractor	Delaware Mine	1884
Lake	J. W. Nichoson, chairman	Farmer	Deer Lake	1884
	D. A. Cornell, secretary	Farmer	Chase	1883
	F. J. West	Farmer	Baldwin	1885

TABLE XXIV.—*Continued.*

Counties.	Names.	Occupations.	Postoffice Addresses.	Years when Terms Expire.
Lapeer	Frank Millis, chairman	Teacher	Almont	1884
	C. H. May, secretary	Teacher	Imlay City	1883
	F. S. Porter	Farmer	North Branch	1885
Leelanaw	W. H. Crowell, chairman	Merchant	Maple City	1883
	S. J. Hutchinson, secretary	Physician	Northport	1884
	Mrs. M. A. W. Dunlap	Teacher	Traverse City	1885
Lenawee	E. G. Walker, chairman	Teacher	Adrian	1884
	D. A. Hammond, secretary	Teacher	Tecumseh	1883
	I. D. Waterman	Teacher	Hudson	1885
Livingston	G. A. Brown, chairman	Teacher	Brighton	1883
	Thomas Gordon, Jr., secretary	Teacher	Fowlerville	1884
	H. E. Reed	Farmer	Howell	1885
Mackinac	J. R. Bailey, chairman	Physician	Mackinac	1883
	Charles Connor, secretary	Lawyer	St. Ignace	1884
	G. A. Cady	Lawyer	St. Ignace	1885
Macomb	O. D. Thompson, chairman	Teacher	Romeo	1884
	Wesley Sears, secretary	Teacher	Mount Clemens	1883
	S. B. Russell	Printer	Mount Clemens	1885
Manistee	James Dodd, chairman	Farmer	Bear Lake	1884
	Miss Mary A. Tibbitts, sec'tary	Teacher	Manistee	1883
	G. H. Kilborn	Farmer	Bear Lake	1885
Manitou	John Dunlevey, chairman	Shoemaker	St. James	1883
	M. F. O'Donnell, secretary	Clerk	St. James	1884
	W. J. Gallagher	Fisherman	St. James	1885
Marquette	Charles Kelsey, chairman	Teacher	Marquette	1884
	M. J. Whitney, secretary	Teacher	Negaunee	1883
	John Northmore	Teacher	Republic	1885
Mason	S. N. Hill, chairman	Clergyman	Ludingtou	1884
	G. H. Blodgett, secretary	Lawyer	Ludington	1883
	J. N. Foster	Teacher	Ludington	1885
Mecosta	P. M. Brown, chairman	Farmer	Big Rapids	1884
	G. R. Malone, secretary	Lawyer	Big Rapids	1883
	W. D. Hopkinson,	Teacher	Paris	1885
Menominee	J. W. Bird, chairman	Merchant	Menominee	1883
	A. W. Bill, secretary	Clergyman	Menominee	1884
				1885
Midland	H. G. Fountaine, chairman	Farmer	Midland	1883
	T. W. Crissey, secretary	Editor	Midland	1884
	Joseph Mayer	Farmer	Midland	1885
Missaukee	A. D. Bell, chairman	Farmer	Roy	1883
	Abraham Stout, secretary	County Clerk	Lake City	1884
	Duncan McBain	Teacher	Cadillac	1885
Monroe	J. R. Rogers, chairman	Farmer	Willits	1884
	J. F. Gilday, secretary	Farmer	La Salle	1883
				1885
Montcalm	E. P. Church, chairman	Teacher	Greenville	1884
	S. F. Kennedy, secretary	Teacher	Lakeview	1883
	F. A. Lyon	Lawyer	Stanton	1885
Montmorency	Jonathan Wiggins, chairman	Farmer	Alpena	1883
	August Bargehr, secretary	Farmer	Otsego Lake	1884
	A. H. Reinsberry	Editor	Alpena	1885
Muskegon	S. M. Burgess, chairman	Teacher	Fruitport	1884
	N. L. Downie, secretary	Teacher	North Muskegon	1883
	J. H. Cogshall			1885
Newaygo	John Harwood, chairman	Teacher	Alleyton	1884
	Tyson Smith, secretary	Physician	Newaygo	1883
	E. H. Hillman	Lumberman	Newaygo	1885
Oakland	E. R. Webster, chairman	Lawyer	Pontiac	1884
	Clark Stanton, secretary	Teacher	Holly	1883
	T. S. Clark	Farmer	Rose	1885

TABLE XXIV.—*Continued.*

Counties.	Names.	Occupations.	Postoffice Addresses.	Years when Terms Expire.
Oceana	Frank Van Wickle, chairman	Druggist	Shelby	1884
	G. C. Myers, secretary	Farmer	New Era	1883
	Seth Edson	Editor	Hart	1885
Ogemaw	T. J. Stottle, Jr., chairman	Farmer	Churchill	1884
	J. S. Fraser, secretary	Physician	West Branch	1883
	J. F. Gregg	Teacher	Maple Ridge	1885
Ontonagon	J. A. Bobb, chairman	Teacher	Greenland	1883
	J. S. Monroe, secretary	Teacher	Ontonagon	1884
	N. W. Hairo	Teacher	Rockland	1885
Osceola	J. B. Sleezer, chairman	Lumberman	Sears	1883
	J. G. Van Winkle, secretary	Teacher	Hersey	1885
	E. H. Woods	Book-keeper	Le Roy	1884
Oscoda	M. H. Colvin, chairman	Farmer	Damon	1883
	S. H. Hagaman, secretary	Farmer	Mioe	1884
	John Randall	Editor	Mioe	1885
Otsego	A. A. Crane, chairman	Lawyer	Gaylord	1883
	F. A. Baldwin, secretary	Lawyer	Gaylord	1884
	J. M. Sanborn	Surveyor	Gaylord	1885
Ottawa	Mrs. A.V. Weatherwax, chair'n	Teacher	Jenisonville	1883
	J. F. Zwemer, secretary	Clergyman	Spring Lake	1884
	A. W. Taylor	Teacher	Nunica	1885
Presque Isle	W. E. Bennett, chairman	Teacher	Rogers City	1883
	A. E. Banks, secretary	Lawyer	Rogers City	1884
	R. J. Horn	Clerk	Rogers City	1885
Roscommon	M. F. Parker, chairman	Mason	Roscommon	1883
	G. L. Alexander, secretary	Lawyer	Roscommon	1884
	James Armstrong	Clergyman	Roscommon	1885
Saginaw	H. C. Tefft, chairman	Clerk	St. Charles	1883
	J. S. Goodman, secretary	Clergyman	East Saginaw	1884
	T. F. Casamer	Teacher	Zilwaukee	1885
St. Clair	Darwin Drake, chairman	Teacher	Goodells	1884
	Harvey Tappan, secretary	Teacher	Marysville	1883
	Lincoln Avery	Teacher	Blaine	1885
St. Joseph	J. W. Bentley, chairman	Farmer	Mendon	1883
	David Howell, secretary	Teacher	Three Rivers	1885
	J. G. Plowman	Teacher	White Pigeon	1884
Sanilac	C. L. Messer, chairman	Teacher	Marlette	1883
	G. A. Parker, secretary	Teacher	Port Sanilac	1884
	W. C. Faxon	Agent	Sandusky	1885
Schoolcraft	J. B. Johnson, chairman	Lumberman	Thompson	1883
	G. K. Newcombe, secretary	Lawyer	Manistique	1884
	A. O. Blackwell	Lawyer	Onota	1885
Shiawassee	W. D. Castle, chairman	Farmer	Bennington	1884
	G. W. Sickles, secretary	Farmer	Gaines Station	1883
	G. R. Brandt	Teacher	Perry	1885
Tuscola	C. Q. Tappan, chairman	Teacher	Vassar	1883
	E. A. Brown, secretary	Druggist	Fostoria	1884
	A. C. Brower	Teacher	Caro	1885
Van Buren	A. E. Ross, chairman	Teacher	South Haven	1884
	Henry Upton, secretary	Teacher	Decatur	1883
	A. C. Martin	Editor	Paw Paw	1885
Washtenaw	G. S. Wheeler, chairman	Merchant	Salem	1883
	W. W. Beman, secretary	Teacher	Ann Arbor	1884
	H. B. Greening	Student	Chelsea	1885
Wayne	C. T. Grawn, chairman	Teacher	Plymouth	1884
	J. P. Reed, secretary	Physician	Rockwood	1883
	F. R. Ward	Teacher	Dearborn	1885
Wexford	G. S. Hicks, chairman	Clergyman	Sherman	1883
	H. C. Foxworthy, secretary	Teacher	Manton	1884
	H. M. Enos	Teacher	Cadillac	1885

DOCUMENTS

ACCOMPANYING THE

REPORT

OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION.

UNIVERSITY OF MICHIGAN.

REPORT OF THE BOARD OF REGENTS.

Hon. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—The second annual report of the Board of Regents of the University of Michigan is herewith submitted, as required by the Legislature in Act No. 206, laws of 1881.

To answer the natural inquiries that might arise, to give the requisite explanations, and to impart all needed information, for the proper understanding of the system of instruction now pursued in the University, the first report was somewhat elaborate, and entered much more into particular detail than can properly be expected of the second or any other subsequent report.

For all practical purposes, so far as the Legislature and their committee are concerned, the two reports are substantially one, the second being only the complement of the first, and both together covering the entire history of the University during the years 1881 and 1882.

This history has been one of steady and uninterrupted prosperity. Owing to some temporary and incidental causes, there have indeed been some fluctuations in the courses of instruction, the popularity of elective studies, and even the relative number of students in the several departments, but the coming year we are fully persuaded, as the result of careful and judicial management on the part of the Board of Regents and of the several faculties, will show that these apparent discrepancies have been fully equalized, and that the progress of the great majority of the departments is quite as encouraging as heretofore.

Since our last report, the term of office of Regents Andrew Climie and E. C. Walker has expired, and Regents Austin Blair and James F. Joy have been elected, to remain in office until 1890.

The safe return of President Angell from his embassy to China has been a matter of much congratulation, alike to the Board and to the University at large.

For the evidences of recent progress, the changes in the faculties (which have been fewer than usual), for the number and nature of the degrees conferred on examination, and for various suggestions of importance in reference to the future of the University, the Board would respectfully refer to the President's report for the year ending Sept. 30, 1882, and herewith submitted as Schedule A.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

The faculty of this department is as follows:

James B. Angell, LL. D., President.

Henry S. Frieze, LL. D., Acting President, and Professor of the Latin Language and Literature.

Hon. Thomas M. Cooley, LL. D., Jay Professor of Law, and Professor of Constitutional and Administrative Law in the School of Political Science.

Edward Olney, LL. D., Professor of Mathematics.

Charles K. Adams, LL. D., Professor of History.

Rev. Benjamin F. Cocker, D. D., LL. D., Professor of Psychology, Speculative Philosophy, and Philosophy of Religion.

Albert B. Prescott, M. D., Professor of Organic and Applied Chemistry and Pharmacy.

Rev. Martin L. D'Ooge, Ph. D., Professor of the Greek Language and Literature.

Charles E. Greene, A. M., C. E., Professor of Civil Engineering.

William H. Pettee, A. M., Professor of Mineralogy, Economic Geology, and Mining Engineering.

Mark W. Harrington, A. M., Professor of Astronomy and Director of the Observatory.

Joseph B. Steere, Ph. D., Professor of Zoölogy, and Curator of the Museum.

Edward L. Walter, Ph. D., Professor of Modern Languages and Literature.

Alexander Winchell, LL. D., Professor of Geology and Palæontology.

William H. Payne, A. M., Professor of the Science and the Art of Teaching.

Isaac N. Demmon, A. M., Professor of English and Rhetoric.

George S. Morris, Ph. D., Professor of Ethics, History of Philosophy, and Logic.

Elisha Jones, A. M., Associate Professor of Latin.

Albert H. Pattengill, A. M., Associate Professor of Greek.

Mortimer E. Cooley, Assistant Engineer, U. S. N., Professor of Mechanical Engineering.

Charles K. Wead, A. M., Acting Professor of Physics.

Byron W. Cheever, A. M., M, D., Acting Professor of Metallurgy.

Volney M. Spalding, A. B., Acting Professor of Botany.

Joseph B. Davis, C. E., Assistant Professor of Civil Engineering.

Wooster W. Beman, A. M., Assistant Professor of Mathematics.

Charles N. Jones, A. B., Assistant Professor of Mathematics.

Richard Hudson, A. M., Assistant Professor of History.

Otis C. Johnson, A. M., Assistant Professor of Applied Chemistry.

Victor C. Vaughan, Ph. D., M. D., Assistant Professor of Physiological Chemistry.

Charles H. Stowell, M. D., Assistant Professor of Histology and Microscopy.

Benjamin C. Burt, A. M., Assistant Professor of English and Rhetoric.

Calvin Thomas, A. M., Assistant Professor of German and Sanskrit.

Charles S. Denison, M. S., C. E., Acting Assistant Professor of Mechanical and Free Hand Drawing.

Henry C. Adams, Ph. D., Lecturer on Political Economy.

P. R. B. DePont, A. B., B. S., Instructor in French, and Secretary.

Alfred Hennequin, A. M., Instructor in French and German.

Calvin B. Cady, Instructor in Music.

Charles M. Gayley, A. B., Instructor in Latin.
Louisa Reed Stowell, M. S., Assistant in Microscopical Botany.
Arthur W. Potter, Assistant in Mathematics.
Geordie Z. Whitney, A. B., Assistant in Mathematics.

Course of Instruction, and Text Books.

I. THE CLASSICS.

1. GREEK.

Lysias.—*Stevens.*
Moods and Tenses.—*Goodwin.*
Xenophon's Symposium.—*Winans.*
Demosthenes's Philippics.—*Tyler.*
Euripides's Bacchæ.—*Sandys.*
Demosthenes's De Corona.—*D'Ooge.*
Homer's Iliad.—*Dindorf.*
Æschylus's Agamemnon.—*Woolsey.*
Theocritus.—*Merry.*
Sophocles's Œdipus Tyrannus.—*White.*
Pindar's Select Odes.—*Seymour.*
Euripides's Medea.—*Allen.*
Homer's Odyssey.—*Merry.*
Sophocles's Electra.—*Jebb.*
Aristophanes's Frogs.—*Green.*
Aristophanes's Acharnians.—*Green.*
Plato's Gorgias.—*Woolsey.*
Thucydides's Capture of Sphacteria.

2. LATIN.

Quintilian, Bk. X.—*Frieze.*
Juvenal.—*Chase & Stuart.*
Plautus.—*Harrington.*
Catullus, Select Poems.—*Simpson.*
Livy, Bk. XXI.—*Lincoln.*
Cicero's Letters.—*Watson.*
Cicero's Tusculan Disputations.
Virgil's Eclogues.—*Frieze.*
Terence's Andria, and Adelphi.—*Chase & Stuart.*
Horace's Satires, Odes and Epodes, Ars Poetica.—*Lincoln, Chase & Stuart.*
Tacitus.—*Tyler.*
Martial's Select Epigrams.—*Stephenson.*

3. SANSKRIT.

Elements of Sanskrit and Comparative Grammar.
Elementar-buch der Sanskrit Sprache.—*Stenzler.*
Nalopákhyánam, 3 books.
Hitopadeça.
Kálidása's Çácuntalá. Act 1.
Glottology—Elements of the Science of Language.

II. MATHEMATICS.

Algebra (University).—*Olney.*
Geometry " "
Trigometry " "
General Geometry and Calculus.—*Olney.*
Calculus.—*Courtenay.*

IN THE HIGHER ELECTIVES.

Doster's Determinants.
Diff. and Int. Calculus.—*Price.*
Quaternions.—*Taite.*
Trilinear Coördinates.—*Whitworth.*
Analytical Statics.—*Mircher.*

III. MODERN LANGUAGES AND LITERATURE.

1. FRENCH.

Grammar (Duffet's).—*Hennequin.*
French Verbs "
Reading Lessons "
Idiomatic French "
Corneille's Le Cid.—*Hachette.*
Madame Therese } *Erckmann-Chatrain.*
L'Ami Fritz }
Molière's Le Misanthrope.
DeMusset's Proverbs and Poetical Selections.—*Hachette.*
Corneille's Horace.
Ruy Blas.—*Victor Hugo.*
Eugenie Grandet.—*Balzac.*
Notre Dame de Paris.—*Victor Hugo.*
Boileau's Satires.—*Hachette.*
Boileau's Lutrin.—*Hachette, Delalaine.*
Montaigne's Essays.
Modern Dramatists.—*Selections.*
Racine's Britannicus.

2. GERMAN.

German Grammar.—*Whitney.*
German Reader "
Deutsche Lyrik.—*Bucheim.*
Tasso.—*Goethe.*
Faust.—*Goethe.*
Prose Selections.
Song of the Bells.—*Schiller.*
Sappho.—*Grillparzer.*

3. Italian.

Grammar.—*Cuore.*
I Promessi Sposi.

IV. HISTORY.

History of England.—*Bright.*
History of the English People. —*J. R. Green.*
History of Civilization in Europe. —*Guizot.*
Constitutional History of United States. —*Von Holst.*
Political and Social History of Europe. —*Lectures.*
Political Institutions and Ideas. —*Lectures.*
Political History of United States. —*Lectures.*
Elements of Constitutional Law.—*Cooley.*

V. PHILOSOPHY.

Elements of Logic.—*Jevons.*
Psychology. } *Cocker.*
Hand-book of Philosophy. }
Ontology.—*Lectures.*

VI. SCIENCE AND ART OF TEACHING.

Education as a Science.—*Bain.*
Lectures on Teaching—*Payne.*
Short History of Education.—*Payne.*

VII. POLITICAL ECONOMY.

Elementary.—*Lectures.*
Advanced.—*Lectures.*

VIII. INTERNATIONAL LAW.

Lectures by President Angell.
In his absence by Mr. Tuttle.

IX. PHYSICAL SCIENCES.

Natural Philosophy.—*Deschanel, Translated by Everett.*
Physics.—*Ganot, Translated by Atkinson.*
Elements of Physical Manipulation.—*Pickering.*
Inorganic Chemistry.—*Miller.*
Analytical Chemistry.
Astronomy.—*Newcomb and Holden.*
Astronomy, Practical.—*Loomis.*
Astronomy, Theoretical.—*Watson.*
Meteorology.—*Loomis.*

X. MINERALOGY AND GEOLOGY.

Manual of Geology.—*Dana.*
Text-book of Mineralogy.—*Dana.*

XI. BIOLOGICAL SCIENCES.

Key to N. A. Birds.—*Cone.*
Manual of Vertebrates.—*Jordan.*
Introduction to Study of Insects.—*Packard*
Manual of Mollusca.—*Woodward.*
Skeleton and Teeth.—*Owen.*
Anat. of Vertebrates.—*Owen.*
Syllabus with References.—*Winchell.*
Manual of Geology.—*Dana.*
Text-book of Geology.—*Le Compte.*

Instruction in elementary paleontology is given wholly by lectures and the use of specimens.

Instruction in advanced paleontology is given in the form of aid to students in the laboratory, who work with zeal and use a large number of books for study and reference.

Botany.—*Bessey.*
Physiology.—*Stowell.*

XII. DRAWING.

Letter-book.—*Copley.*
Topography.—*Smith.*
Fortification and Stereotomy.—*Mahan.*
Descriptive Geometry.—*Church.*
Shades, Shadows, and Perspective. —*Warren.*

XIII. SURVEYING.

Use of Transit and Level—Solar Compass, Sextant, Etc., Field work.

XIV. CIVIL, MINING, AND MECHANICAL ENGINEERING.

Civil Engineering.—*Rankine, Lectures.*
Graphics, I., II., III.—*Greene.*
Descriptive Geometry.—*Church.*
Field-book for Engineers.—*Hencks.*
Steam Engine.——*Rankine, Northcote.*
Work-shop appliances.—*Shelley.*
Casting and founding.—*Spretson.*
Complete Practical Machinist.—*Rose.*
Elements of Machine Design.—*Unwin.*
Machinery and Mill Work.—*Rankine.*
Naval Architecture.—*Thearles.*
Elements of Machine Construction. —*Warren.*
Estimates, Specifications, Contracts. —*Lectures.*
Thermodynamics.—*Röntgen.*
Ship Building.—*Wilson.*

XV. MUSIC.

XVI. BIBLIOGRAPHY.

Number of Students in the Various Courses.

The number of students in the various courses, and present at examination, is shown by a table prepared and certified to by the secretary of the literary faculty. This table is given in Schedule C, which accompanies this Report. A careful analysis of this table will give all the information desired as to classification and relative amount of studies. The maximums are as follows:

	No. of Students.		No. of Students.
Greek	76	General Astronomy	44
Latin	89	Mineralogy	26
Mathematics	94	Geology	65
French	161	Zoölogy	45
German	112	Forestry	45
English language and literature	125	Drawing	43
History	79	Surveying	16
Philosophy	152	Civil engineering	12
Science and art of teaching	34	Mechanical engineering	6
Political Economy	60	Metallurgy	5
International law	75	Music	38
Physics	60		

Other Departments.

The condition of the other departments, including the Department of Medcine and Surgery, Department of Law, School of Pharmacy, Homœopathic Medical College, and College of Dental Surgery, is substantially the same as reported last year, consequently it has not been deemed necessary to make any special report this year concerning them.

For additional information attention is directed to the several schedules that accompany this report.

Respectfully submitted,

GEORGE DUFFIELD,
BYRON M. CUTCHEON,
SAMUEL S. WALKER,
JACOB VAN RIPER,
JAMES SHEARER,
E. O. GROSVENOR,
AUSTIN BLAIR,
JAMES F. JOY,

Regents.

A.

PRESIDENT'S ANNUAL REPORT.

To the Honorable Board of Regents:

In offering to you my annual report for the academic year ending September 30, 1882, I desire, first of all, to thank you most sincerely for the kindness with which you granted me leave of absence, in 1880, to undertake important diplomatic duties entrusted to me by the President of the United States. I wish also to make most hearty and grateful recognition of the eminent services of Dr. Frieze, who, at your request, assumed the burdens of my office, and brought to his work an energy and skill which largely conduced to the marked prosperity of the University during the last two years.

I cannot but congratulate you on the evidences which I find of the progress that was made during my absence. The eye and ear infirmary was erected, the sewer extending from our grounds to the river was completed, the capacity of the chemical laboratory was nearly doubled, the museum building was completed and occupied, the interior of the north college was partially reconstructed, and the new fire-proof library building, so long desired and so sorely needed, was begun. A professor of mechanical engineering was appointed, and work in that useful branch has been organized and has been begun with a skill and an enthusiasm which promise excellent results. A school of political science has also been established, and has been most warmly commended by the public press. The number of students during the last two years has been larger than ever before. All these signs of growth and prosperity are most inspiriting.

The changes in the faculties during the past year have been fewer than usual. William P. Wells, A. M., Kent Professor of Law, who had been unable, by reason of illness for some time, to discharge his duties, has resumed his place. Henry Sewall, M. D., has been appointed Professor of physiology in the department of medicine and surgery, and has been for some months giving instruction.

Degrees have been conferred as follows:

DEGREES ON EXAMINATION.

Bachelor of Letters	8
Bachelor of Science	9
Bachelor of Philosophy	19
Bachelor of Arts	39
Master of Letters	1
Master of Science	3
Master of Philosophy	1
Master of Arts	4
Doctor of Philosophy	2
Doctor of Medicine (Department of Medicine and Surgery)	92
Bachelor of Laws	170
Pharmaceutical Chemist	40
Doctor of Medicine (Homœopathic College)	15
Doctor of Dental Surgery	32
	435

HONORARY DEGREES.

Master of Arts	2
Doctor of Philosophy	2
	439

Of those who were graduated as Bachelors of Science, three had taken the course in Civil Engineering. The degrees of Civil Engineer and Mining Engineer are now offered only as second degrees.

The number of students in attendance was fifteen hundred and thirty-four, exactly the same as in the previous year. They were distributed as follows:

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

Resident Graduates	13	
Candidates for a Degree	398	
Students not Candidates for a Degree	102	513

DEPARTMENT OF MEDICINE AND SURGERY.

Resident Graduate	1	
Third Year Students	97	
Second Year Students	144	
First Year Students	138	380

DEPARTMENT OF LAW.

Seniors	179	
Juniors	216	395

SCHOOL OF PHARMACY.

Resident Graduate	1	
Second Year Students	44	
First Year Students	55	100

HOMŒOPATHIC MEDICAL COLLEGE.

Students—total in the College	71

COLLEGE OF DENTAL SURGERY.

Students—total in the College	75
	1,534

Of these, the number of women was 184, as follows:

Literary Department	110
Department of Medicine and Surgery	44
Department of Law	2
School of Pharmacy	5
Homœopathic Medical College	19
Dental College	4

A good proportion of the women who have graduated here are holding conspicuous positions either as medical practitioners or as teachers in high schools, academies, and colleges. No less than six members of the present faculty of

Wellesley College, including the president, are graduates of this University. Several women, who graduated from the medical department, are in heathen lands, discharging the varied and responsible duties of medical missionaries.

About three-fifths of the students in the literary department were from Michigan. More than half of the students in the other departments were from elsewhere. Perhaps no other institution in the country has so wide-spread a constituency. Last year we had students from every one of the eastern, the middle, and the western states, and from every southern state but four, from four territories and the District of Columbia, and from Ontario, New Brunswick, Manitoba, the Hawaiian Islands, Nicaragua, Cuba, Bermuda, England, Ireland, Roumania, Egypt, and Burmah.

It is a cause of satisfaction that the increase in attendance has not been due to the lowering of the standard of admission, but has come during those years when we have been gradually raising the standard. The attainments of students who matriculate as candidates for degrees in the department of literature, science, and the arts, represent nearly, if not quite, a year's work in addition to what was asked ten years ago. We are grateful to the excellent high schools in the State for their aid in accomplishing this most desirable result. The increased requirements for admission to the professional schools, though by no means so stringent as we hope to see them at no distant day, have had a beneficial influence on the schools. The lengthening of the medical course to three years, and the grading of the work, have attracted rather than repelled the best class of students. It seems probable that the increase in fees which it has been deemed necessary to make, will cause a slight diminution in attendance the coming year.

Work in the chemical laboratory has been very auspiciously begun. The courses offered have proved very attractive and very beneficial. It was not possible for the professor alone, and in his narrow quarters, to give instruction to all who desired it. The utility of actual work with tools and machines to engineers is now recognized in leading schools on both sides of the Atlantic. It is to be hoped that means may be placed at our disposal for enlarging the equipment of the laboratory, and for providing a suitable assistant for the professor.

The attention of the Board has been called, during the year, to the need of a more thorough organization of the microscopical work in the University. The aid of the microscope in giving instruction or in making researches in several of the sciences, is now so indispensable that within the last few years we have been purchasing instruments until now they number more than a hundred. These are used in the study of human, comparative and vegetable histology, botany, zoölogy, mineralogy, paleontology, pathological anatomy, and physiological and analytical chemistry.

Notwithstanding our supply, our students are so numerous that some addition to it seems to be needed. It appeas also that in order to secure economy and efficiency, we should have a central laboratory, for instruction in the use of the instruments in histology and pathological anatomy. Instruction by the microscope in the other sciences could be given in the rooms now devoted to it. The report presented by a special committee of professors on the whole subject is so exhaustive that I need not do more than to express the hope that we may be able at no distant day to provide the needed laboratory and instruments.

Our laboratory of physics needs important additions to its apparatus. Perhaps in no department has the progress of investigation been more rapid during the last few years than in physics. In none have more important discov

eries been made. The leading institutions in the land have therefore wisely devoted large sums to the equipment of laboratories for instruction and research in physics. In no branch is our supply of the proper means of illustration so inferior to that of the best schools. I trust that, as rapidly as our friends will permit, we shall place our physical laboratory at least on an equality with those of institutions whose grade of scientific work may be fairly compared with ours.

The school of political science, which was established at the beginning of the year, has attracted much attention, and the plan of work laid out for it has been heartily approved by the press of the country. The courses of instruction were attended by interested classes. Some pains were found necessary to secure a desirable adjustment of the work of the school to that of the department of literature, science, and the arts, but the result has been satisfactorily attained, and there seems to be now no obstacle to the successful career of the school. The establishment of similar schools in other universities is only one of many signs that the need of special training in the political sciences is widely recognized. The report of the dean of the school furnishes details of the year's work. [See Schedule B.]

Acting President Frieze, in his learned and suggestive report last year, called attention to the propriety of drawing the line at the end of the second or sophomore year of college life, not only in the school of political science, but in the entire department of literature, science, and the arts, between the secondary education and the higher or genuine University education. The subject has received most careful and prolonged consideration during the year from the faculty of that department. The result of their deliberations appeared in the plan which, in May, they asked you to adopt. It permits students to proceed for the bachelor's degree on the "credit system," which has been in use in the past. But it also permits those who have completed two years of work to proceed for a degree upon what we call the "university system." Under this the candidate will not be held to the completion of a fixed number of courses, but will, under the direction of a committee of the faculty, take a large amount of work in a limited range of studies, and at the end of the fourth year of residence sustain a searching examination. If his attainments warrant, he will win a bachelor's degree; if they are very conspicuous and he presents a meritorious thesis, he may attain a master's degree. He may then continue his studies for a doctor's degree. It is expected that those who seek a degree upon the university system will pursue a somewhat freer method of study than others, and will concentrate their labor on a few studies with the purpose of making large attainments in them, rather than of making limited attainments in many studies. It is hoped that a manly and enthusiastic spirit of investigation and research will be fostered, and that scholarship of a lofty type will be stimulated. We are aware that we are taking a very important and a bold step. But it is not the first time that this University has taken bold steps. It is entirely probable that we may find it expedient to modify some of the details of the scheme we have adopted. But we are very hopeful that the general results will justify us in retaining the main features of our plan.

The reports of the deans of the professional schools show that they have been enjoying their usual prosperity. The faculty of the department of medicine and surgery has been strengthened by the addition of a professor of physiology. He needs very much a larger equipment for the development of a physiological laboratory. It is a cause of satisfaction that the professional schools are able

to continue to raise gradually their standard of admission, without reducing their numbers.

It seems probable that soon the question of larger hospital accommodations will be forced upon us. The official reports show that the pressure on us was very great last year and a considerable number of patients, I am informed, were obliged to find rooms in private houses. It would not be difficult to show that the hospitals return to the State more than the value of all it expends on them by restoring to health and productive power persons who would otherwise remain as a charge upon the public treasury. If the State should see fit to erect a hospital sufficiently large, and the counties, or a considerable number of them, should send here their invalid poor, now lying helpless in the almshouses, and pay for their support while they are under the skillful treatment of our professors and our nurses, it cannot be questioned that the investment would be profitable to the State.

As a University we are interested in observing that the subject of education for the professions is receiving more and more attention from the public. There is an unmistakable drift of enlightened public opinion towards demanding a more complete education of the practitioners of law and of medicine than has hitherto been exacted in this country. How to secure the desired elevation of the standard of professional education is a problem, for which various solutions have been proposed.

I cannot but think that it would conduce greatly to this end if there were fewer schools, and if those really needed were constituent parts of universities. The number of law schools is perhaps not much in excess of what we need, and most of them are connected with some university. But there are certainly a good many superfluous medical schools, and a certain number of unnecessary theological schools. The increased facilities of communication by railway have removed the only argument which ever existed for many of the professional schools. Every one knows the history of the origin of not a few medical colleges. A half dozen physicians in some town imagine that if they can prefix the title "Professor" to their names, and persuade a few students to hear them lecture, they will thus secure the best possible advertisement for themselves. As the fees are small, the shorter the course of lectures, the better for the professors. As they give for two short courses a diploma every whit as handsome as can be gotten from Harvard or Michigan in three long years, the students are as delighted as the professors. The country is speckled with these advertising establishments for ambitious physicians, who delude young men into the belief that after a few weeks' attendance upon lectures they have become fitted to practice a learned profession, and to take the care of men's lives into their hands. A few of these short-course schools have, it is true, a nominal connection with colleges, though really they are self-governing. With very few exceptions, the theological schools are dissociated from colleges or universities, even when they are in the same town with them, and in most cases college towns have not been chosen as the sites of divinity schools.

Now I believe that all these professional schools, including those meritorious medical colleges which have virtually an independent organization, would be far more profitable to their students if they were really so incorporated into a vigorous university that they caught the spirit of its life. The danger of a young man who is pursuing special studies in one department of thought in an isolated school is, that he takes on a certain one-sidedness of culture: there is

an intellectual breeding in and in with his own sort, which leads to a lack of the best vigor. His horizon is not extended. He often has what may be called a mental provincialism. He fails to get a right view of the miscellaneous world into which he is going.

But give him access to museums and great libraries, not devoted to the illustration merely of his special studies, let him now and then hear the lectures of gifted professors on topics which he has had no opportunity to master; and his horizon will be broadened and his culture will be enriched. But above all, the influence of association with students who are working in other departments than his own, who are looking at many truths from a different point of view, will have a most healthful and liberalizing influence. It will help him cast down his idols of the cave. It will lead him to look all around a truth, and to judge how the great variety of men in the world will regard it. It will aid him in comparing the methods of investigation in his profession with the methods in the other professions. If the attrition with others rubs off many of the angularities of his mind, he will be none the worse for that.

To the theological student would the life of the real university be specially helpful. Such are the relations of scientific investigation and discussion to theology now that the divinity schools are constrained to secure a few special lectures from scientists, or to establish professorships, in which the new aspects of religious and scientific truth are presented. But surely the investigations and prelections of the acknowledged masters of science like Pierce or Henry or Dana at a university would be generally more helpful than the instructions of special apologists. If there is any one, who should be familiar with all phases of current thought, who should have felt the stir of the best intellectual life of the young men just coming on to the stage of action, it is the preacher. But too often the little retired seminary with its quiet life keeps him in a sort of monastic seclusion. When he emerges from it and is confronted with the bright, active minds of men trained in other professions, he is frequently surprised and puzzled. Could he have associated with them some what freely during the period of his professional study, he would have both received and imparted good.

The law student also is likely to profit much by the opportunity to hear lectures on history and the political sciences.

In short the university life, with its manifold stimulations, must greatly aid every professional student in avoiding the perils of entering upon his work in life with either an exaggerated view of its relative importance or a narrow view of it as a trade, a mere means of earning bread. It sends him forth with a broader, larger, more vigorous manhood than he would be likely to acquire in an isolated school.

Again, the incorporation of professional schools into one university may be urged, because thus the proper elevation of the standard of admission and of work can be more easily secured. My remarks on this head are not applicable to divinity schools, where the standard of admission is quite high enough, but they do apply to law schools and medical schools.

It needs no argument to show that there is an inherent weakness in the organization which leaves the pay of the professors dependent entirely on the receipts from students' fees. In such a case no reform, however desirable, can readily be made, if it tends to diminish the number of students even temporarily. Average human nature even in professors is too weak to be iconoclastic at the sacrifice of bread and butter. So inclined are teachers, especially elderly teachers, to stick fast in the old ways, so averse are even institu-

tions with large means to reduce their attendance, that progress even in universities (including our own) in raising the qualifications for admission and the grade of work in professional studies, has been much too slow. I need not say how much slower it has been in independent professional schools. At least one conspicuous medical school in New York, which in a moment of heroic courage recently undertook to lift its standard higher, after a few weeks of experiment retreated hastily to its old position.

That the requirements for admission to nearly all of our medical students is now shamefully low—at most of them there are none at all—and that the grade of work done in them is too low, and that in most of them the course is far too brief, no intelligent man can doubt. It may be said that is is useless to elevate the standard of a few schools, while the great mass of them makes no change. But we may hope that the stimulating influence of the better schools will not be lost on the others. It is one of the cheering facts in respect to medical education that the schools which have acted bravely have not long suffered from lack of students, but have after a little regained their old numbers. This shows that public opinion is ripe for improvement. But the lead in that improvement must come in the main from schools in which the salaries of the teachers are not dependent on the number of students in attendance.

Although it be conceded to Tertullian that theology is "the queen of the sciences," yet for obvious reasons which were apparent to the founders of the University we cannot have a theological school as a part of this institution. But I have long thought—and in holding this opinion I am simply concurring with my honored predecessors, Presidents Tappan and Haven—that it would have been of great advantage to the churches of the west and certainly no disadvantage to the University, if the religious denominations which desire divinity schools in this section of the Union had seen fit to plant them in this city near to us. We could have extended to them our hospitalities without inconvenience or expense, could have given their students and teachers access to our libraries and museums and some of our lectures, could have kept them in contact with university life, and could have doubtless drawn from them both scholarly and religious inspirations which we should have prized. Perhaps it is not too late for some of the Christian communions to think upon this subject. It is well known that at least two or three important religious bodies are considering the expediency of founding halls in which the students of their faith attending the University may live together in their own Christian home. Such a hall might, if its founders and patrons desired, easily become the germ or the predecessor of a school of theological instruction. Of course the University could have no further interest in any such school than that which comes from having a pleasant and edifying neighbor, with which it could freely exchange courtesies. But we might well be gratified at seeing such neighbors settle near us.

The report of the committee on finance is heretofore appended. [See Schedule F.] Notwithstanding our large resources, the demands made upon our treasury by our varied work are so heavy that the greatest economy is absolutely necessary.

I am happy to report that the growth of the library has been greater than in any previous year since it was established. The increase has been 2,700 volumes and 479 pamphlets. The chief donors of books have been Mr. E. C. Hegeler and Hon. Philo Parsons. Owing to unexpected delay in procuring some of the materials for the new library building, the completion of it cannot be expected until

several months hence. But when it is completed, no pains should be spared to make a large addition to our collection of books. Our library, admirable as has been the selection of books for it, is not worthy of the University. There can be no great university without a good library. Private munificence cannot furnish us so valuable aid in any other way as by placing at our disposal a handsome sum for the purchase outright of a large number of books, or still better perhaps by endowing us with a permanent fund which, for all time to come, shall yield its blessing to the University. The State cannot perhaps do its citizens a better service than by generously assisting in the building up of one library within its borders where they can come to find needed help in the investigation of any subject.

Dr. Frieze, in his report last year, was called to pay his tribute of respect to four eminent men who had died after leaving bright records as friends and servants of the University: Professor Watson, Governor Bagley, Ex-President Haven, and Professor Williams. Hardly was his report in type, before the news came from beyond the sea of the sudden death of the first President of the University, Dr. Henry P. Tappan. You have already spread upon your records your testimony to his distinguished abilities and to his eminent services to this institution. Dr. Frieze, in his commemorative address, delivered at commencement, has so admirably depicted his character and his career that I need not dwell upon them here. But this report of the year would be very incomplete if it did not express, however briefly, the appreciation which we all feel of the great indebtedness of the University to him who, in its youthful days, gave it its form and its inspiration, and who, in a very emphatic sense, may be called the founder of the University which we know. The generation of the founders is indeed passing away. But it is gratifying to us that so many of them lived to see the reward of their toils in the present prosperity and strength of the institution to which they gave the best years of their lives. It stands and will ever stand as the proud monument of their devotion and wisdom.

JAMES B. ANGELL,
President.

B.

REPORT OF THE DEAN OF THE SCHOOL OF POLITICAL SCIENCE.

To the Honorable, the President and the Regents of the University of Michigan:

GENTLEMEN,—The Dean of the School of Political Science would beg leave to report that the school was organized in accordance with the provisions made by the Regents in June of 1881; and that the work of instruction was begun at the commencement of the ensuing university year. The time that elapsed between the first announcement of the school and the opening of classes was too short to justify anticipations of any considerable increase, on account of the new school, of the number of students in the academic department of the University. It is also to be said that at the beginning of the year there was considerable uncertainty as to whether students of the school of political science might be admitted to other degrees than that of doctor of philosophy; and, until this question was settled, it was not thought wise to encourage students to transfer themselves from the courses in which they had previously been enrolled. But notwithstanding these facts, it is gratifying to note that all the classes were attended by an encouraging number of students.

The following table, made out from the records, does not include the very considerable number of students who attended the lectures without desiring credit therefor, but embraces simply the number actually present at the final examinations:

FIRST SEMESTER.

Name of Course.	No. of Students.
General History of England from the accession of Henry VI. to the meet- of the Long Parliament. Assistant Professor Hudson	67
General History of Continental Europe from the Reformation to the French Revolution. Assistant Professor Hudson	60
Constitutional History of the United States from the adoption of the Constitution to the Administration of President Jackson. Assistant Professor Hudson	30
The Elements of Constitutional Law. Assistant Professor Hudson	24
The Political History of the American Colonies to the Close of the Revolutionary War. Prof. C. K. Adams	65
The History of the English Government since the Close of the Napoleonic Wars. Prof. C. K. Adams	67
Historical Seminary. Advanced Course in the Constitutional History of England. Prof. C. K. Adams	13
The Elements of Political Economy, including: Historical Development of the Science; Its Basis; Production; Exchange; and Distribution. Dr. H. C. Adams	60
Advanced Political Economy, including: The Principle of Free Competition; Free Trade and Protection; Crises, Commercial Depression and Poverty; The Migration Question; The Transportation Question; and Social and Industrial Reforms. Dr. H. C. Adams	25
Rights, including: Natural Rights; Civil Rights; Rights both Civil and Political; Political Rights; Rights of Denizens. Judge T. M. Cooley.	13
Sanitary Science, including: Chemical Biology; Foods; Water and Air Supply; Supply of Fuel and Light; Ferments and Germs; Disposal of Decomposing Matter; Public Nuisances; Vital Statistics, and influence of vocations on health; Meteorological Conditions of Health and Disease; Duties of Boards of Health and of Health Officers; and General Health Laws. Assistant Professor V. C. Vaughan	57

SECOND SEMESTER.

General History of England from the meeting of the Long Parliament to the Close of the Napoleonic Wars. Assistant Professor Hudson	62
History of Civilization in the Middle Ages. Assistant Professor Hudson.	33
Constitutional History of the United States since the Administration of President Jackson. Assistant Professor Hudson	32
Theories and Methods of the English Government. Professor C. K. Adams,	80
The History of Political and Social Institutions. Professor C. K. Adams,	61
Historical Seminary; Political and Constitutional History of United States. Professor C. K. Adams	12
The Elements of International Law. President J. B. Angell	80
The Science of Forestry, including: Historical Development of the Science; Influence of Forests on Human Affairs; Control of Forests; and Forest Legislation in Europe and America. Assistant Professor Spalding	48

Two of the above-named courses,—the course in Rights and the course in Forestry,—are worthy of especial note, not simply for the reason that they were given last year for the first time in this institution, but also from the fact, that, so far as is known, courses upon these subjects have never before been given in any American university. It cannot but augur well for the school that the subject of political and social ethics from a practical and legal point of view should be given by so eminent an authority as Judge Cooley, as the foundation of his subsequent courses on constitutional and administrative law.

The course on forestry has naturally attracted much attention; and it is not a little singular that a subject of so much importance has hitherto been entirely neglected by our colleges and universities. Within the past few years the necessity of some care of our forests has impressed itself upon the people of our country as never before. Their rapid disappearance in some parts of the land is a matter of the gravest consequence. Not only are vast economic questions directly involved in the destruction of timber, but, what is, perhaps, of even greater importance, if this destruction is not properly guarded against or counterbalanced by the judicious planting and care of trees, even our climate is in danger of being permanently changed. In this State our forests are a great source of wealth; and there is no one of our industrial resources that is worthy of more careful study. We have recently had painful admonitions that the unwise cutting away of our forests may be attended with the most appalling consequences. The mere statement of these facts is enough to show that the subject is entitled to the most careful consideration. In the old world schools of forestry have long devoted themselves to a systematic study of the various ways in which the questions that now perplex us in regard to the care of forests are best to be met. As the fruit of studies carried on in these schools, and the consequent wise management of forests, Germany is much less likely to suffer in the near future from the want of the different kinds of useful woods, than is the United States. An important literature on the subject has grown up; and, although it is not to be supposed that the methods adapted to European requirements can be transferred to America without essential modifications, yet it is certain that great advantage may be gained from a familiarity with the results of European study and experience. From the appropriation made a year ago for the school of political science, a considerable number of valuable works on the subject of forestry have been placed in the University library. But the subject must also be studied in the light of practical observation. It is gratifying to note that the establishment of the course in forestry has already attracted the attention of the Commissioner of Agriculture, and that our school is likely to be the recipient of such favors as the Commissioner may have it in his power to bestow.

In addition to the courses of instruction given during the past year, several new courses will be given in the year to come. Arrangements have already been completed by which, without further expense to the University, courses will be given on the principles of finance; on the financial history of the United States; on the history of diplomacy; on the history of political ideas; on methods of local government; on theories and methods of taxation; on political ethics; on social science; on the historical development of educational systems; on the economic development of mineral resources; and on public scientific surveys. Thus it appears that the school enters its second year under favorable omens. Its establishment and the scope of its instruction

have attracted much attention, and have called forth not a little favorable comment. The present number of students in the classes and the zeal with which they are entering upon their work, promise to justify the approving words with which the establishment of the school was so generously greeted.

Respectfully submitted,

C. K. ADAMS,
Dean.

C.

TABLE

Showing the Number of Students in the Various Courses and Present at Examination; Prepared and Certified to by Prof. P. R. B. de Pont, Secretary of the Literary Faculty

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
	GREEK.		
I	Lysias; Athenian History; Goodwin's Moods and Tenses...	52	4
III	Demosthenes (De Corona); Lectures on the Greek Orators...	76	4
IV	Homer (Iliad)	12	2
V	Teachers' Course (Greek Grammar and Selections from the Anabasis)	10	1
VI	Homer (Odyssey)	46	3
VIII	Theocritus	12	2
X	Teachers' Course (Anabasis, and Prose Composition)	5	1
XII	Æschylus (Agamemnon); Euripides (Medea)	5	2
XIII	History of Greek Literature and Art	51	1
XIV	Sophocles (Œdipus Tyrannus); Aristophanes (Acharnians)...	24	4
XVIII	Xenophon (Symposium); Thucydides (Capture of Sphacteria); Euripides (Bacchæ)	6	2
XIX	Demosthenes (Philippics I and III); Aristophanes (Birds)...	5	2
XX	Sophocles (Electra); Aristophanes (Frogs)	22	4
XXI	Plato (Gorgias)	8	2
XXII	Pindar (Selected Odes)	3	2
	LATIN.		
I	Livy (Book XXI); Latin Grammar; Latin Prose Composition	89	3
II	Quintilian (Book X); Odes of Horace; Notes on Roman Literature	71	4
V	Teachers' Course	15	1
VI	Terence (Andria and Adelphi); Horace (Satires and Epistles)	82	4
VII	Odes and Epodes of Horace	22	2
VIII	Horace (Ars Poetica); Juvenal; Persius	70	4
IX	Tacitus (Germania, and Agricola)	15	3
X	Cicero's Tusculan Disputations	6	2
XII	Teachers' Course (Prose Composition)	9	1
XIV	Essays of Seneca	19	1
XVII	Plautus (Rudens, Miles Gloriosus Mostellaria)	13	2
XVIII	Catullus (Select Poems)	21	2
XIX	Cicero's Letters	16	2
	SANSKRIT.		
I	Elements of Sanskrit and Comparative Grammar, etc., etc...	3	2
II	Continuation of Course I, etc., etc.	3	2
III	Elements of the Science of Language. Lectures	6	2

TABLE.—CONTINUED.

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
	MATHEMATICS.		
I	Advanced Algebra	38	4
II	General Geometry and Calculus	41	4
III	Advanced General Geometry and Calculus	18	5
IV	Determinants	7	2
V	Advanced Geometry; Plane and Spherical Trigonometry	34	4
VI	General Geometry and Calculus, Continuation of Course II	41	4
VII	Modern Geometry and Trilinear Co-ordinates	1	2
IX	Quaternions	12	3
X	Plane and Spherical Trigonometry	94	2
XI	Analytical Mechanics	10	5
XII	Loci of Equations	86	1
XIII	General Geometry and Calculus	9	5
XIV	Advanced Algebra	68	2
XV	Geometry	67	2
XVI	General Geometry and Calculus, Continuation of Course XIII	9	5
	FRENCH.		
I	Beginning French (Hennequin's Duffet's Grammar; Hennequin's Verbs; Hennequin's Reading Lessons)	161	4
II	Idiomatic Analysis (Hennequin's Lessons in Idiomatic French); Composition and Conversation	52	4
III	French Classics	24	3
IV	Romantic Dramas	14	2
V	Hennequin's Duffet's Grammar; French Plays and Modern Prose	140	4
VI	Bolleau's Lutrin and Conversation; Critical Analysis in French of some modern works	35	4
VII	Montaigne	11	3
VIII	Masterpieces of the Nineteenth Century	25	3
IX	Teachers' Course	19	1
	GERMAN.		
I	Beginning German (Whitney's Text books)	112	4
II	Goethe's Torquato Tasso; German Lyrics	79	5
III	German Plays	95	4
IV	Lessing's Laocoon	27	2
V	Prose selections, minor classics	26	2
VI	Goethe's Faust	69	3
VII	The Nebelungenlied	13	2
VIII	The Nebelungenlied, continuation of course VII	6	2
IX	Herder's Ideen Zur Geschichte der Menschheit	9	2
	ITALIAN.		
I	Cuore's Italian Grammar. I Promessi Sposi	12	2
	ENGLISH LANGUAGE AND LITERATURE.		
I	Higher English Grammar and Composition; Abbot's How to Parse, and How to Write Clearly	125	2
II	Rhetoric; Theory and Practice. D.J. Hill's Science of Rhetoric	15	2
IV	Anglo-Saxon. Sweet's Anglo-Saxon Reader; Morley and Tyler's Manual	45	2
V	Early Modern English; English Literature; Morris's Prologue and Knight's Tale	94	2
VI	Study of Masterpieces	40	3

TABLE.—CONTINUED.

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
VII	Same course as I	64	2
VIII	" " " II	19	2
IX	English Literature. Transitional Period	38	2
X	" " Modern English Period	50	2
XI	" " Study of Shakespeare	29	3
XIII	Grammatical and Critical Study of Selections in Prose and Poetry	33	2
XIV	History of English Drama	26	1
	HISTORY.		
I	General History of England from the Accession of Henry I to the meeting of the Long Parliament	67	2
II	History of Civilization in the Middle Ages	29	2
III	The History of the English Government since the close of the Napoleonic Wars	67	3
IV	Historical Seminary. The Constitutional History of England	13	3
VII	General History of Continental Europe from the Reformation to the French Revolution	53	2
IX	General History of England from the meeting of the Long Parliament to the close of the Napoleonic Wars	59	3
X	Constitutional History of the United States from the Adoption of the Constitution to the Administration of President Jackson	30	2
XI	The Government of England: Its Theories and Methods	79	2
XII	Historical Seminary. Political and Constitutional History of the United States	15	3
XIV	Constitutional History of the United States	32	2
XV	Political History of the American Colonies from the Settlement of Virginia to the close of the Revolutionary War	65	1
XVI	The Constitution of the United States	22	2
XVII	History of Political and Social Institutions from the Adoption of the Constitution of Solon to the Period of the Reformation	60	3
	Course on Civil Rights, given in the School of Political Science	11	2
	PHILOSOPHY.		
I	Psychology	58	4
II	Speculative Philosophy (Ontology) embracing Rational Cosmology and Rational Psychology	32	5
III	Logic: (1) The Science of the Laws of Thought; (2) The Science of Knowledge in General	152	2
IV	General History of European Philosophy, Ancient and Modern	12	4
V	Philosophy of Religion, including Evidences of Christianity	41	3
VI	Ethics, Historical and Theoretical	34	2
VII	Philosophical Seminary	3	2
	SCIENCE AND ART OF TEACHING.		
I	Practical Course	34	4
II	Theoretical, Critical, and Historical	8	4
III	School Supervision	15	2
IV	Seminary, for the study and discussion of special topics in the history and philosophy of education	11	2
	POLITICAL ECONOMY.		
I	Elementary Course	60	2
II	Advanced Political Economy	26	2

TABLE.—CONTINUED.

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
	INTERNATIONAL LAW.		
I	Lectures on International Law	75	2
	PHYSICS.		
II	Experimental Lectures with Recitations from Text-book	39	5
III	Physical Laboratory Work	3	3
IV	" " "	3	5
VI	Teachers' Course	3	2
X	Advanced Physics, Lectures and Recitations	19	5
	GENERAL CHEMISTRY.		
II	Experimental and General Lectures with Recitations	60	5
IV	Laboratory Methods of Studying General Chemistry	.4	3
V	Same Subject as in Course IV	3	5
	ANALYTICAL CHEMISTRY AND ORGANIC CHEMISTRY.		
I	Qualitative Analysis	21	10
II	Advanced Qualitative Analysis	2	4
III	Qualitative Analysis	23	5
IV	Organic Chemistry; Proximate Organic Analysis	3	5
V	Quantitative Analysis (a)	4	7
	" " (b)	3	5
VI	Organic Chemistry	5	2
VII	Ultimate Organic Analysis	4	5
VIII	Physiological Chemistry	3	5
XI	Assaying; Wet and Dry Ways	2	3
X	Blow-pipe Analysis	14	2
XI[a]	Continuation of Course II (Original Investigations)	1	5
XII	Assaying; Dry Way	4	2
	ASTRONOMY.		
II	General Astronomy	44	2
III	Spherical and Practical Astronomy	8	2
V	General Meteorology	11	2
VIII	Elementary Practical Course	2	5
X	Advanced Practical Course	1	5
	MINERALOGY.		
I	Short Course	26	2
II	Mineralogy and Lithology	2	5
III	Special advanced work	1	2
	GEOLOGY.		
I	General Geology, Part I	65	2
II	Oral Exercises, Supplementary to Course I, and parallel with it	54	1
III	Advanced Geology and Paleontology	6	2
IV	Paleontological Investigations	3	5
V	General Geology, Part II	27	1
VI	Oral Exercises, parallel with Course V	23	1
IX	Geology of the United States	1	2
VII	Paleontological Investigations as in course IV	1	5
	ZOÖLOGY.		
I	Systematic Zoölogy (introductory)	45	5

TABLE.—CONTINUED.

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
III	Comparative Anatomy and Physiology	43	5
IV	Identification and special study of Vertebrates	16	5
VIII	Advanced work in the study of Vertebrates	7	5
X	Embryology	4	5
XI	Ichthyology	1	5
	BOTANY.		
I	Study of Fungi	3	5
II	Structural and Pharmaceutical Botany	3	1
III	Structural Botany and Microscopy	21	5
IV	Study of Algæ	4	2
VI	Forestry	45	1
VIII	Advanced work	3	3
	PHYSIOLOGY.		
I	Physiology and Histology	38	2
II	Laboratory Work	23	1
	DRAWING.		
I	Geometrical Drawing	29	2
II	Topographical Drawing, Lettering, and Ornamentation	16	2
III	Mechanical Drawing		
IV	Free-hand Drawing; Pen and Ink Drawing	43	3
V	Descriptive Geometry	22	3
VI	Shades, Shadows, and Perspective	8	3
VII	Advanced Free-hand Drawing	13	3
VIII	Architectural Water-color Drawing	2	2
	SURVEYING.		
I	Surveying; Use of Transit and Level	16	3
II	Surveying with Compass; Solar Compass; U. S. Surveys	16	2
III	Higher Surveying; Plane Table; Sextant; Earth-work	15	5
IV	Field work	15	4 weeks in field.
	CIVIL ENGINEERING.		
I	Strength and Resistance of Materials	6	2
II	Engineering; Theory of Construction	6	1
III	Graphical Analysis of Structures	6	2
IV	Engineering Design	5	5
V	Mechanism and Machine Drawing	12	2
VI	Machinery and Prime Movers; Water Wheels and Steam Engines	6	3
VII	Engineering; Theory of Construction	5	4
IX	Hydraulics; Water Supply and Sewerage	5	1
X	Stereotomy	9	2
	MECHANICAL ENGINEERING.		
I	Workshop Appliances and Processes, Pattern Making, Moulding and Founding	5	
III	Mechanical Laboratory Work	6	2
IV	Machinery, Machine Construction, and Drawing	4	2
V	Same as Course V in Civil Engineering	12	3
VI	Same as Course VI in Civil Engineering	6	2
VII	Machine Design	1	3
IX	Original Design, Estimates, Specifications and Contracts	1	3
			2

TABLE.—CONTINUED.

No. of Course.	SUBJECT.	No. of Students.	No. of hours per week.
XI	Naval Architecture	1	2
	METALLURGY.		
I	Fuel and Refractory Material, Iron, Steel, Copper, and Zinc	1	3
II	Lead, Silver, Gold, Mercury and other Metals	5	2
	MUSIC.		
I	Science and Practice of Choral Music	38	2
II	Science of Harmony	8	2
III	Science and Practice of Choral Music	17	2
IV	Science of Harmony	2	4
V	Science and Practice of Choral Music	12	2
VI	Simple Counterpoint	4	4
VIII	Science of Harmony	4	4
IX	Male Chorus	6	2

D.

REVISION OF THE TERMS ON WHICH DEGREES ARE CONFERRED IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS; AND IN THE SCHOOL OF POLITICAL SCIENCE.

The Board of Regents, at their meeting in May, 1882, adopted a resolution accepting and ratifying a scheme for defining more precisely the relation of the school of political science to the department of literature, science, and the arts, and for revising the terms on which degrees are conferred. The scheme had previously met the approval of both faculties. As a result of this action candidates for degrees in the department of literature, science, and the arts, and in the school of political science, will hereafter be recommended for graduation in accordance with the terms of the new scheme, which is here given in full as adopted by the Board of Regents:—

(1) The school of political science, though still regarded as a part of the department of literature, science, and the arts, shall be practically an independent organization, so far as relates to the general administration of the work of the school, except as provided below.

(2) The members of the special faculty of the school of political science shall also be members of the faculty of the department of literature, science, and the arts.

(3) All candidates for degrees in the department of literature, science, and the arts, including those whose work has been done wholly or in part in the school of political science, must be recommended to the Board of Regents by the faculty of the department.

(4) The "credit system" as at present administered shall remain in force for students that wish to obtain a Bachelor's degree under the provisions of that system.

(5) The present system of conferring a Master's degree on the completion of thirty full courses shall be discontinued.

(6) Students that have taken a Bachelor's degree on the "credit system" may be recommended by the faculty for the corresponding Master's degree

after an additional year of residence at the University, provided they pass a satisfactory examination on an approved course of study and present a satisfactory thesis.

(7) Students that have completed their second year in the department of literature, science, and the arts, and have also completed all the prescribed work offered in the first two years in some one of the several lines of study leading to a Bachelor's degree, may be allowed to choose whether they will continue their work on the "credit system" or on the so-called "university system."

(8) Students working on the "university system" will not be held to the completion of a fixed number of courses, though they must take an amount of work approved by the faculty, or by a special committee of the faculty, and will be held subject to all the rules relating to attendance and to examinations, unless excused by the proper authority. Before they can be recommended for a degree, however, they must have completed all the courses prescribed for the degree sought.

(9) Any student working on the "university system" may be admitted to a special examination for a degree at a date not earlier than the end of his fourth year of residence at the University, the examination to be conducted under the direction of those officers of instruction with whom such student has pursued the major part of his work. The degree conferred on such student may be either a Bachelor's or a Master's degree, and may be distinguished as conferred with "distinction," "with high distinction," "with the highest distinction," "*cum laude*," "*magna cum laude*," or "*summa cum laude*," according to the merit of the student, it being understood that the presentation of a thesis shall in all cases be necessary for the attainment of a Master's degree. The title of the degree, whether in arts, philosophy, science, or letters, shall be determined by the character of the prescribed work completed by the student.

(10) The Doctor's degree shall be conferred only on persons that have previously received a Bachelor's or a Master's degree.

(11) The Doctors' degrees shall be conferred only on persons who have made special proficiency in some one branch of study and good attainments in two other branches, and upon presentation of theses that shall evince the power of research and of independent investigation.

(12) The degree of Doctor of Philosophy shall be open to persons that have received the degree of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Letters (Latin), or a corresponding Master's degree; the degree of Doctor of Science to persons that have received the degree of Bachelor of Science or of Master of Science; and the degree of Doctor of Letters to persons that have received the degree of Bachelor of Letters or of Master of Letters.

(13) No person shall be admitted to the examination for a Doctor's degree in less than two years from the date of his first degree, whether that be a Bachelor's or a Master's degree, except such persons as shall have received a Master's degree with some special mark of distinction. Such persons may present themselves for examination for a Doctor's degree in one year after the attainment of the Master's degree.

The Board of Regents also authorized the faculty of the department of literature, science, and the arts to arrange such details as may be necessary for carrying the new scheme into effect. Acting under this authority the faculty have adopted, in further explanation and development of the scheme, the following resolutions:

(1) The new regulation discontinuing the conferring of a Master's degree under the "credit system" is not intended to apply to students now in the University who shall complete, before the date of the annual commencement in 1884, all the requirements for a Master's degree, as they are published in the Calendar for the year 1881–82.

(2) As a general rule, students that wish to study for a degree under the "university system" will be expected to arrange their preliminary work in such a way as to be able to announce their purpose to the faculty by the end of their second year of collegiate residence, though in cases of exceptional character the faculty may grant permission to students to begin work under that system at a later date.

(3) Students now in the University, who have completed their second year of residence, but have not yet completed all the work prescribed for some one of the ordinary degrees, that has been offered during their term of residence, may apply for permission to continue their work under the "university system" Applications of this nature will be granted by the faculty if the general scholarship of the applicants warrants them in so doing; but always with the understanding that all arrearages of prescribed work must be made up by any student to whom the privilege has been granted, before he can be recommended for graduation.

(4) The work of students carrying on their studies under the "university system" will be supervised by special committees of the faculty. To carry this provision into effect, eight members of the faculty have been chosen to serve, for the year 1882–83, as chairmen of committees designated, respectively, as committees on

(*a*) Ancient languages and literatures (Greek, Latin, Sanskrit): Professor D'Ooge, chairman.

(*b*) Mathematics: Professor Olney, chairman.

(*c*) Modern languages and literatures (French, German, Italian, Spanish, English): Professor Walter, chairman.

(*d*) History and political science (history, political economy, international law, sanitary science, rights, social science): Professor Adams, chairman.

(*e*) Philosophy and the fine arts (philosophy, pedagogy, music): Professor Payne, chairman.

(*f*) Physical sciences (physics, chemistry, astronomy, mineralogy): Professor Pettee, chairman.

(*g*) Geology, zoölogy, and botany (including physiology): Professor Winchell, chairman.

(*h*) Engineering (drawing, surveying, engineering, metallurgy): Professor Greene, chairman.

Each student will be required to register his name with the chairman of the committee in charge of the subjects to which the most important part of his work belongs, and will also be required to conform to all regulations that committee may make in regard to matters affecting his course of study.

(5) Examinations passed at the close of each semester on ordinary class-work shall not count as an equivalent or in abatement of the final examination to be passed for a degree under the "university system."

(6) Candidates for the degrees of Doctor of Philosophy, Doctor of Science, or Doctor of Letters, in case of the acceptance of their theses, will hereafter be required to have the accepted theses printed, and to present twenty-five copies of the same to the library of the University, unless by special vote of the faculty a smaller number is deemed sufficient.

E.

INSTRUCTIONS TO APPLICANTS FOR THE HIGHER DEGREES.

1. Resident applicants for an advanced degree are required to announce to the faculty through the President as early as *October 15* of each year, the particular branches of study to which they wish to give especial attention. As soon as practicable after such announcement the faculty will appoint a special committee under whose direction the studies of each applicant will be carried on.

2. The subject for the required thesis is to be determined by the applicant, on consultation with the special committee appointed to direct his studies; and unless a postponement is specially granted by the faculty, the subject of the thesis must be announced to the President as early as *December 1*.

3. It is required that so far as the resources of the University permit, the thesis be upon a subject requiring research, and that the research be carried on under the guidance of the proper committee. Of applicants for the Degree of Doctor of Philosophy it is especially required that "*the successful candidate shall evince power of original research, and of independent investigation.*"

4. The faculty requires, as an introduction to the thesis, an analytical table of contents, and a carefully prepared account of the authorities made use of.

5. The thesis must be completed and put into the hands of the chairman of the proper committee as early as *May 1*.

6. The thesis must be prepared for close scrutiny with reference, not only to its technical merits, but also to its merits as a specimen of literary workmanship.

7. The thesis must be read and defended in public at such time as the faculty may appoint, and a bound copy, either written or printed, must be deposited in the University library.

F.

REPORT OF THE FINANCE COMMITTEE.

Before presenting the statement of the receipts and expenditures for the past year, it has been thought proper to review for a moment the sources of income of the University. The funds of the University accrue from three principal sources:

1st. From the endowment of the United States.

2d. From appropriations by the Legislature for special and specific objects.

3d. From students' fees and charges. Small sums accrue from other sources, but not in such amounts or with such regularity as to be classed as a permanent income.

The endowment of the University originally came from the General Government in a grant of lands the proceeds of the sale of which are in the hands of the State. On this the University receives from the State interest at the rate of seven per cent per annum. This interest is now nearly a fixed quantity and amounted in 1882 to $38,398.47. A portion of the lands is still held on

"part-paid certificates," and the irregularity of the payment of interest by these private holders, and the occasional surrender or forfeiture of these lands, cause the small variation of the sums received from this source. There is still due from the purchasers of University lands, upon "part-paid certificates," $60,621.11, as appears by the records of the State land office. There remain unsold, of the lands granted by the General Government, but 287.75 acres, as appears by a statement from the office of the Land Commissioner, dated May 1, 1882.

The Legislature of 1873, by act No. 32, provided that an annual tax of 1-20th of a mill on the dollar should be levied on all the property of the State and paid to the University as a "State Aid." The sum now annually received from this source is $40,500. By legislative act No. 128, 1875, establishing the Homœopathic Medical College, the sum of $6,000 was provided annually for the support of this department. These comprise all the items of income coming to the University from stated appropriations; large sums are, however, from time to time generously provided by legislative acts for special and specific objects.

The fees received from students have been frequently changed, and as they stand at present are as follows:

For Matriculation in the University by a resident of this State	$10 00
For Matriculation in the University by non-residents	25 00
For Annual Tax in Literary Department for residents of Michigan	20 00
" " " " " non-residents	30 00
" " " Law Department " residents of Michigan	25 00
" " " " " non-residents	35 00
" " " Medical Department " residents in Michigan	25 00
" " " " " non-residents	35 00
" " " Homœopathic College " residents of Michigan	25 00
" " " " " non-residents	35 00
" " " Dental College " residents of Michigan	25 00
" " " " " non-residents	35 00
" " " Pharmacy School " residents of Michigan	25 00
" " " " " non-residents	35 00

The following are the charges for material, use of instruments, etc., in certain departments of work:

To Students in the Histological Laboratory	$3 00
" " Medical Therapeutics, per course	1 00
" " the Microscopical Laboratory, per semester	3 00
" " Practical Anatomy, per semester	10 00
" " Surgical Anatomy, per semester	5 00
For Diploma Fees in all Departments	10 00
For Teachers' Certificates	1 00

The following deposits are made in advance by students as security for payment for materials to be used:

Students in Qualitative Chemistry, per semester	$10 00
" " Qualitative Analysis, "	10 00
" " Quantitative Analysis, "	20 00
" " Pharmacy Preparations, "	20 00
" " Organic Analysis, "	5 00

Students in Urine Analysis, per semester	$10 00
" " Saliva Analysis, "	5 00
" " Toxicology	5 00
" " Physiological Chemistry	10 00
" " Assaying	5 00
" " Blowpipe Mineralogy	5 00

From the students in the Dental College there are received funds in payment of material used, etc., in their operating rooms and Laboratory.

From both hospitals, also, there are received sums for the sale of medicines and appliances.

The State Board of Auditors, by law of 1881, reimburse the University for the board and expenses of certain destitute and dependent children sent to the Hospitals for treatment.

The miscellaneous resources of the University consist of:

1st. Interest on bank account;

2d. Anatomical material sold to other medical colleges in Michigan, etc., as provided by legislation of 1881;

3d. Sale of property.

The condition of the funds of the University as shown by the balance sheet and the estimates for the current year, make it apparent that some further changes must be made, either increasing the income or decreasing the expenses.

Your committee do not deem that any important increase can be made in the income of the University from students' fees; they would, however, recommend that the scheme for fees in the Microscopical Laboratories as reported by the committee in June last (see Regents' Proceedings, page 208), be adopted.* A revision of the charges in the Chemical Laboratory would likely also add a little to the income from that source.

Sundry changes in the duties and salaries of the various officers and employés of the University, as will be hereafter indicated, can be made to reduce somewhat the expenditure.

The methods pursued in the Laboratories requiring the deposit of a stated sum to apply on material used, should be extended to the dental department. A system of coupon receipts, such as are used in the Laboratories, by which a student is at no time without a full receipt for all payments made, and the University at the same time has a perfect set of vouchers, should be introduced into all the departments. The system of accounting at the Chemical Laboratory by which the accounts in detail are kept by the Treasurer, can perhaps be shortened up so that the burden of the work will have to be done but once, and the Treasurer will be relieved of a large amount of detail work.

The record of *all* goods ordered should be kept at one office, so that the obligations outstanding can readily be ascertained.

When funds are appropriated by the Board for a specific object, the Secretary should be directed to keep an account of the same by crediting that amount to a separate account bearing a proper heading, and as goods are ordered or work performed for these specific objects, the account should be at once debited with the same, whether the bill is yet paid, or even presented, or not; and if the amount cannot be definitely ascertained, an approximate amount should be inserted, that at all times the true condition of the funds may appear.

In presenting the annual report of the treasurer to the finance committee,

* The change was made October 11, and the fee was fixed as above reported, at $3.

which we submit as the report of the committee, we take great pleasure in certifying to the accuracy, clearness, and amplitude of detail of the report, and to the thorough and able manner in which the work of that office has been done. The items have all been checked, and for each item a voucher in proper form was found. There are 1,604 vouchers. All the footings have been carefully checked.

The accuracy of entries of receipts from students, whether for admission fees, annual dues, laboratory expenses, practical anatomy, or diplomas, was checked by the tickets issued by the steward. The entry of receipts from miscellaneous sources was, in a majority of cases, tested in the same way. The number of tickets examined was about 5,000, and the statement and tickets agree throughout. For the items of miscellaneous receipts for which no tickets were issued by the steward, other satisfactory evidence was found.

Careful examination of the stubs of the tickets issued by the steward was made, to see that all were properly paid. Besides those of recent date outstanding, some fourteen were discovered that had not been presented to the treasurer. The corresponding dues had not been paid. In several cases it is probable the sums due will yet be paid. A few students either left without going farther than to get the steward's ticket, or did not take the courses indicated by the tickets, after making application for them.

The disbursement vouchers were carefully examined as to the classification of accounts, and no variation of importance from the classification intended was found.

This examination of the treasurer's account in detail was made by Professor W. H. Pettee, at the request of and under the direction of the committee, and was most carefully and thoroughly done.

The receipts of the treasury from the State were carefully compared with a statement of the same from the office of the Auditor General, and verified completely.

The following is the treasurer's statement of the receipts and expenditures for the fiscal year ending September 30, 1882:

RECEIPTS.

Balance in treasury, October 1, 1881	$7,262 78
Received from State Treasurer:	
For University interest	38,398 47
State aid, 1-20th mill tax, Act of 1873	38,250 00
Homœopathic medical college, Act of 1875	6,000 00
" " " " 1881	2,000 00
College of dental surgery, Act of 1881	9,000 00
General library, Act of 1881	2,500 00
University hospital, Act of 1881	3,500 00
Library building, Act of 1881	50,000 00
Mechanical laboratory, Act of 1881	1,000 00
Homœopathic hospital, Act of 1881	2,000 00
Received from Board of State Auditors for board of Dependent Children, Act of 1881	663 25
From First National Bank, Ann Arbor, interest	397 35
Balance, dental materials sold	689 08
Sale of anatomical material	573 50
Sale of coal, school district No. 1, Ann Arbor	302 08

From Errors in vouchers			$5 07
Sale of medicines, etc., at university hospital			343 85
" " " homœopathic hospital			138 31
Loans			$35,000 00
From students' fees, laboratory deposits, etc., as follows:			
In literary department		$21,255 00	
In department of law		19,495 00	
In department of medicine and surgery		18,405 00	
In school of pharmacy		3,880 00	
In college of dental surgery		3,775 00	
In college of homœopathy		2,485 00	
For deposits in chemical laboratory		10,744 70	
For deposits in practical anatomy		4,670 00	
For diplomas		4,427 00	
For deposits in physiological laboratory		273 00	
For deposits in general chemistry		161 00	
For deposits in microscopical laboratory		146 00	
Total		$89,716 70	
Less:			
Students' fees refunded	$2,061 00		
Laboratory, deposits refunded	1,463 91		
Practical anatomy, deposits refunded	200 00		
General chemistry, deposits refunded	12 69		
		3,737 60	
Net receipts			85,979 10
Total receipts			$274,002 84

DISBURSEMENTS.

Paid salaries of officers, professors, and employés:		
From General fund	$104,740 82	
Homœopathic medical college	6,675 00	
College of dental surgery	6,300 00	
University hospital	675 00	
Total amount paid for salaries		$118,390 82
For current expenses		42,389 35
Loans paid		25,000 00
College of dental surgery, special		1,343 30
College of dental surgery, advertising		211 25
Homœpathic medical college, special		1,103 29
Advertising " " "		205 75
University hospital, special		3,935 40
Steam heating, "		2 53
General library, "		2,168 23
Homœpathic hospital, "		1,990 93
Library building, "		42,612 85
Eye and ear ward, "		830 21
Mechanical laboratory, "		2,500 00

For Sewer, special	$2,565 50
Board of dependent children	634 68
Balance in treasury, September 30, 1882	28,118 75
	$274,003 84

General Fund.

Receipts.

Received from State Treasurer:	
For University interest	$38,398 47
State aid, 1-20th mill tax, act of 1873	38,250 00
Received from loans at Ann Arbor Savings Bank	25,000 00
" " First National Bank, Ann Arbor, interest	397 35
" " Balance of dental material sold	689 08
" " Sale of anatomical material	573 50
" " Coal sold school district No. 1, Ann Arbor	302 08
Errors in vouchers	2 07
Transfer from university hospital	337 50
Students' fees, laboratory deposits, etc	85,979 10
Total receipts	$189,929 15

Disbursements.

Balance overdrawn October 1st, 1881	$665 71
Paid salaries of officers, professors and employés	104,740 82
Paid vouchers on contingent fund	5,069 11
" " alterations and repairs	6,448 57
" " fuel and lights	6,340 32
" " grounds	189 40
" " insurance	2,092 24
" " postage	960 51
" " engineering department	512 88
" " general library	1,900 93
" " school of political science	419 86
" " law library	231 18
" " medical library	277 09
" " museum	660 92
" " microscopical laboratory	250 45
" " chemical laboratory	9,291 44
" " anatomical fund	2,726 51
" " steam heating	359 56
" " ventilation	208 64
" " special appropriation, H. S. Frieze	265 50
" " construction	119 51
" " printing calendar and proceedings	1,337 17
" " advertising law department	76 00
" " " medical department	258 15
" " " school of pharmacy	124 93
" " department of general chemistry	353 71
" " " physics	836 48
" " astronomical observatory	53 36

Paid vouchers on physiological laboratory	$468 13
" " furniture and fixtures	452 10
" " repairs on President's house	104 70
" " loans paid Ann Arbor savings bank	25,000 00
Transfer to museum building	1,403 07
" " mechanical laboratory	1,000 00
" " homœopathic hospital construction	1,053 40
Balance in treasury September 30, 1882	13,676 80
Total disbursements	$189,929 15

SPECIAL FUNDS.

College of Dental Surgery.

Receipts—		
Balance in treasury, October 1, 1881		$616 19
Received from State Treasury		9,000 00
Total receipts		$9,616 19
Disbursements—		
Paid salaries of professors and employés	$6,300 00	
" vouchers for current expenses	1,343 30	
" " " advertising	211 25	
Total disbursements		7,854 55
Balance in treasury, September 30, 1882		$1,761 64

Homœopathic Medical College.

Receipts—		
Balance in treasury, October 1, 1881		$862 71
Received from State Treasury		8,000 00
Total receipts		$8,862 71
Disbursements—		
Paid salaries of professors and assistants	$6,675 00	
" vouchers for current expenses	1,193 29	
" " " advertising	205 75	
Total disbursements		7,984 04
Balance in treasury, September 30, 1882		$878 67

University Hospital.

Receipts—	
Balance in treasury, October 1, 1881	$1,721 38
Received from State Treasury	3,500 00
" " sales of medicine, etc.	343 85
Error in footing voucher	3 00
Total receipts	$5,568 23

Disbursements—		
Paid salaries of physician and nurses	$675 00	
" vouchers for current expenses	3,935 40	
Transferred to general fund	337 50	
Total disbursements		$4,947 90
Balance in treasury, September 30, 1882		$620 33

Steam Heating.

Balance in treasury, October 1, 1881	$2 53
Paid voucher on same	2 53

Museum Building.

Balance overdrawn, October 1, 1881	$1,403 07
Transferred to general fund	1,403 07

General Library.

Receipts—		
Balance in treasury, October 1, 1881		$82 68
Received from State treasury		2,500 00
Total receipts		$2,582 68
Disbursements—		
Paid vouchers for purchase of books		2,168 23
Balance in treasury, September 30, 1882		$414 45

Homœopathic Hospital.

Receipts—		
Balance in treasury, October 1, 1881		$1,149 56
Received from State treasury		2,000 00
" " sale of medicine, etc.,		138 31
Total receipts		$3,287 87
Disbursements—		
Paid vouchers for current expenses		1,900 93
Balance in treasury, September 30, 1882		$1,296 94

Library Building.

Receipts—		
Balance in treasury, October 1, 1881		$2,086 80
Received from State Treasury		50,000 00
Total receipts		$52,086 80

Disbursements—	
Paid vouchers for construction	$42,612 85
Balance in treasury, September 30, 1882	$9,473 95

Eye and Ear Ward.

Balance in treasury, October 1, 1881	$918 61
Paid vouchers on same	830 21
Balance in treasury, September 30, 1882	$88 40

Mechanical Laboratory.

Receipts—	
Balance in treasury, October 1, 1881	$500 00
Received from State Treasury	1,000 00
Transferred from general fund	1,000 00
Total receipts	$2,500 00
Disbursements—	
Paid vouchers for construction and equipment	2,500 00

Sewer.

Balance in treasury, October 1, 1881	$2,444 50
Paid vouchers for construction	2,565 50
Balance overdrawn, September 30, 1882	$121 00

Homœopathic Hospital and Amphitheatre.

Balance overdrawn, October 1, 1881	$1,053 40
Transferred from general fund	1,053 40

Board of Dependent Children.

Received from Board of State Auditors	$663 25
Paid vouchers for board of said children	634 68
Balance in treasury, September 30, 1882	$28 57

RECAPITULATION.

Balances in Treasury, September 30, 1882:	
College of dental surgery	$1,761 64
Homœopathic medical college	878 67
University hospital	620 33
General library	414 45
Homœopathic hospital	1,296 94
Library building	9,473 95

Eye and ear ward	$88 40
Board of dependent children	28 57
General fund	13,676 80
	$28,239 75
Less overdrawn balance, sewer	121 00
Total balance in treasury	$28,118 75

In submitting the estimate of receipts and expenditures for the current year, the committee have two or three items to which they wish especially to call your attention:

1st. As to the propriety of estimating the receipt of $15,500 from appropriations by the Legislature to commence January 1. These items are, for the Dental College, $8,000; the University Hospital, $3,500; the Homœopathic Hospital, $2,000; and the Homœopathic Medical College, $2,000. Without these appropriations these Departments in our care must cease, and it is not to be supposed that after so carefully fostering these institutions and realizing such benefits from them as are apparent, they will cease to receive the fostering care of the Legislature.

2d. The estimates of expenditures are made quite in detail, and are thereby more readily examined, and should bear careful criticism.

3d. That in the estimates of disbursements, the debts for expenses of the current year already incurred are classified, and the balances due the special funds set forth as liabilities, thereby fully showing the condition of the funds as near as practicable.

ESTIMATES OF RECEIPTS FOR THE YEAR ENDING SEPTEMBER 30, 1883.

Balance in treasury, October 1, 1882	$28,118 75
To be received from University interest	38,000 00
" " " State aid, 1-20 mill tax	40,500 00
" " " " for homœopathic college	6,000 00
" " " " " library building	45,000 00
" " " sale of dental materials	500 00
" " " " anatomical material to other Michigan colleges	500 00
To be received from sale of medicine, University hospital	340 00
" " " " " homœopathic hospital	130 00
" " " " interest on bank account	250 00
" " " " students' fees, laboratory charges, etc.	70,000 00
" covered into treasury, commission on sales dental material, 1881–2	1,092 96
	$230,431 71

Estimating the grants of the Legislature the same as for the past two years, there will be received from this source:

For the dental college	$8,000 00	
" University hospital	3,500 00	
" homœopathic hospital	2,000 00	
" " medical college	2,000 00	
		$15,500 00
Total receipts estimated at		$245,931 71

ESTIMATES OF EXPENDITURES FOR THE YEAR ENDING SEPTEMBER 30, 1883.

For salaries of professors, officers, and employés		$122,180 00
current expenses, dental college		1,500 00
" " homœopathic medical college		1,500 00
" " University hospital		4,000 00
" " homœopathic hospital		2,000 00
completion of library building		54,473 95
alterations and repairs		3,000 00
fuel and lights		8,500 00
grounds		500 00
insurance		2,000 00
the general library		500 00
" " " removal and incidental thereto		500 00
" medical library		300 00
" law library		300 00
" school of political science		300 00
" Annual Calendar and Regents' Proceedings		1,500 00
" postage		800 00
" anatomical fund		2,800 00
" chemical laboratory supplies		4,000 00
" microscopical department		500 00
" mechanical laboratory		500 00
" astronomical observatory		1,000 00
" engineering department		500 00
" department of physics		500 00
" physiological laboratory		500 00
" museum		500 00
commencement expenses		1,000 00
law commencement expenses		150 00
diplomas and filling the same		600 00
printing, other than Calendar and Regents' Proceedings		900 00
lease of water privilege		50 00
Total		$217,353 95
For sundry contingent bills, unpaid	$903 69	
balance of unexpended appropriation of June, 1882, for steam pipes, etc.	169 80	
For unexpended balance of appropriation of June, 1882, for professor of physiology	742 85	
For bills incurred and goods ordered for chemical laboratory	3,868 42	
		5,684 76

For advertising,	department of medicine	$200 00	
"	law department	200 00	
"	homœopathic medical college	200 00	
"	dental college	200 00	
"	school of pharmacy	200 00	
"	literary department	200 00	
			$1,200 00
For contingent expenses			3,000 00
Total expenditures estimated at			$227,238 71
Balance forward 30th Sept., 1883			18,693 00
			$245,931 71

SAMUEL S. WALKER,
E. O. GROSVENOR,
J. J. VAN RIPER,
Committee.

STATE BOARD OF EDUCATION

ANNUAL REPORT.

To the Superintendent of Public Instruction:

SIR,—In accordance with the provisions of law, the State Board of Education herewith submits the following report for the fiscal year ending September 30, 1882:

The duties of the State Board of Education include the care of the State Normal School; the granting of diplomas to the graduates of the School; the selecting and contracting for books for township and district libraries; the granting of State certificates on examination; and the preparation of questions for use in the examination of common school teachers throughout the State. As these duties have been specifically set forth in previous reports, a brief statement of the work the Board has performed during the past year, and of the condition of the interests under its charge, is all that now seems necessary.

STATE NORMAL SCHOOL.

During the period embraced in this report several changes have taken place in the Board of Instruction of the Normal School. As was stated in the report for last year, the vacancy occasioned by the resignation of Dr. MacVicar was supplied by the temporary appointment of Prof. Daniel Putnam as Acting Principal, with Prof. Lewis McLouth as assistant. This arrangement continued until August 19, 1882, when Prof. Putnam was elected Acting Principal for the ensuing academic year. In consequence of Prof. Putnam's entrance upon the exclusive duties of Principal, the directorship of the practice school became vacant, and upon the completion of the new building for the use of that school, the duties and responsibilities of Director were very considerably increased. The Board accordingly elected Prof. Austin George to this position, and gave to him power and authority in all respects similar to that exercised by the heads of other departments of the School. Besides these duties, he remains in charge of the work in rhetoric, and is also *ex officio* Vice Principal. Upon effecting this change, Mrs. Lucy A. Osband was employed as instructor in the academic department, to which also Miss Bignell was transferred, their duties to be assigned by the Principal. Miss Bignell was succeeded as critic teacher in the practice school by Miss Ency J. Coleman, formerly principal of the training school at Kalamazoo.

The Board has prescribed the following

Requirements for Admission to the Normal School:

1. All applicants for admission must sustain a thorough examination upon the following subjects:

(*a.*) Arithmetic, which includes a thorough acquaintance with the facts, principles, and operations of simple and compound numbers, of common and decimal fractions, of ratio and proportion, of involution and evolution, and of percentage, and the ability to work readily and neatly examples under each of these heads;

(*b.*) Elements of English grammar, which includes a thorough knowledge of the parts of speech, of the elements of the sentence, and of the classification and analysis of sentences according to use and structure;

(*c.*) Geography, which includes a thorough knowledge of the natural divisions of land and water, their location and characteristics; of the political divisions, including countries with their inhabitants, governments, products, industries, religion, education, and important cities; of the form and motions of the earth and the phenomena resulting therefrom, as the succession of day and night, change of the seasons, the boundaries of zones, classification of circles, latitude and longitude;

(*d.*) Reading, which includes a thorough knowledge of the correct use of inflection and emphasis, and the ability to read with expression any ordinary passage of prose or poetry;

(*e.*) Spelling, which includes the ability to spell and write correctly words in common use in ordinary reading matter;

(*f.*) Penmanship, which includes the ability to write a free, bold hand.

2. Any pupil who has sustained the required examinations for admission will be admitted at any time to advanced rank in any of the courses of study in the school, by sustaining the examinations required for such advanced rank, or without examination on presenting a certificate of standings from the superintendent or principal of a high school, graded school, or other institution of learning approved by the faculty. *Such certificate, in order to be accepted, must state definitely the amount and kind of work covered by the standing given.*

3. Ladies must be not less than sixteen, and gentlemen not less than eighteen years of age, before entering the second year of the common school course, or before entering the third year of any of the other courses of the School.

The Board has authorized several changes in the courses of instruction. At present students are offered a choice from among five different and distinct courses of study: scientific course, language course, literary course, art course, and common school course. In all the above courses, except the last, the student is allowed an election of Latin, French and German, in the place of certain specified subjects, and thus he has practically an option of seventeen courses. For a further exhibit of the several courses of instruction, reference is made to the accompanying report of Prof. Putnam.

Professional Course.

Any person who, as provided for in the requirements for admission to advanced standing, sustains examinations or presents certificates of standing in all the academic subjects of any course, may complete the professional

work of that course in one year. It is desirable, however, in order to get the full benefit of the advanced courses, that the work of the last two years of these courses should be taken in the School.

Professional Training.

Under this head are included the following classes of work:

1. During the first year of the common school course and the first and second years of the other courses, each pupil is required to note carefully the method of instruction pursued by the teacher, and to be able, when the subject is completed, to give an accurate account, either orally or in writing, of the following points:

(*a.*) The order in which each topic was discussed;

(*b.*) The illustrations and devices used to enlist the attention of the pupils, and to make plain the truth presented;

(*c.*) The method of drill pursued to fix the truth permanently in the memory.

2. During the second year of the common school course and the third year of the other courses, the principles of teaching and of school organization, based upon the constitution and laws of the body and mind, are carefully discussed. This is followed by special professional training in a sufficient number of subjects in each course to secure in the pupils habits of teaching and governing in harmony with the principles discussed. This part of the work includes the following:

(*a.*) A discussion of the order which should be pursued in presenting the given subjects to a class;

(*b.*) A discussion of the illustrations and devices that should be used to enable the pupils to understand thoroughly the subject presented, and to fix a sharp outline of it in the memory;

(*c.*) The preparation of sketches or outline lessons which are submitted to the teachers for criticism;

(*d.*) Teaching and governing in the Practice School under the guidance and instruction of competent teachers, whose duty it is to observe carefully, to criticise and correct all defects.

There have been added to the general library during the year 1,080 volumes of good and well selected books. In making additions to the library, constant reference is had to the fact that the Normal School is a professional school, and so, large additions have been made to the collection of works on educational science. The other departments of the School, however, have not been neglected in the selection of books for the library. The facilities for full work in the department of English literature have been greatly increased, while the art department and the departments of science, mathematics, history, and language have received great aid. A number of the best educational journals, several of the leading reviews, two or three journals of science, and several of the best literary monthlies are taken for use in the general reading-room. The State Board of Education has authorized the establishment, in each department, of special departmental libraries. Here are kept cyclopedias, technical dictionaries, standard authorities, and such books as are more often needed for consultation in the recitation rooms than in the general reading-room.

For the accommodation of these special libraries suitable book-cases have

been provided. The charge of the general library has been committed to Prof. Lodeman.

The Board has also been able, by a judicious application of the funds at its disposal, to make considerable additions to the collection of scientific apparatus, drawing models, maps, globes, charts, etc., by which instruction in the several departments is greatly improved. The department of physical sciences, for which the greater part of these expenditures was incurred, has thus been provided with facilities for work better calculated to meet the needs of special students.

The New Building.

For a number of years it was felt that the building used for the training and practice school was ill suited to the purposes of such a school, many of the class-rooms being in the basement, ill lighted, poorly ventilated, and over-heated. Besides, the building did not provide the necessary number of rooms for the successful working of the school. The Board, therefore, decided to ask of the Legislature of 1881 an appropriation for a new building. Near the close of the session the Legislature made an appropriation of twenty-five thousand dollars for this purpose. After full study of the matter with architects and with the Board of Instruction, it was decided to erect this building as a wing to the main building. The architect, Mr. Julius Hess of Detroit, was instructed to prepare plans and specifications accordingly. After due advertisement for bids, on the 16th of August, 1881, the contract for the carpenter work was let to Mr. H. Goodspeed of Ypsilanti for the sum of $9,084.54, the contract for the mason work to Messrs. Stangé & Candler of Detroit for the sum of $9,860.98, and the contract for steam-heating apparatus was, in December following, awarded to the Detroit Metal and Heating Works for the sum of $3,721.30.

Prior to the completion of the training school building it was seen that at a comparatively small outlay the plan of construction could be so varied as to allow a suitable observatory to be erected upon the building, which, at a cost of about $700, affords convenient accommodations for work in practical astronomy, by the use of the instruments owned by the School, among which are an equatorial telescope, a meridian transit, a chronometer, a chronograph, etc. July 24, 1882, a contract was entered into in the sum of $807.51 for the furnishing of seats, desks, tables, etc., for the training school, and the making of some needed repairs upon the furniture already in use.

The new building was completed and in readiness for the opening of the school in September, 1882. With the better accommodations thus afforded, the Board are confident that the training and practice school will in the future, even better than in the past, contribute its part to the work of training teachers.

Graduates.

In accordance with the provisions of law, the State Board of Education granted, during the school year 1881–2, eighty-two diplomas to students who had completed one of the prescribed courses of the Normal School, and had been recommended by the Board of Instruction as entitled to graduation.

The following are the names of the graduates:

COMMON SCHOOL COURSE.

Helen A. Allen, Cooper.
Edith F. Blythe, Marquette.
Addie M. Buell, Richmond.
Ellen M. Brady, Port Stanley, Ont.
Hattie E. Coonley, Farmington.
Anna Conlon, Dexter.
Helen Cowan, Port Huron.
L. Mary Dwyer, Dexter.
Joanna E. Dees, Pleasantville, Pa.
Jane M. Eugenia Ellis, Charlotte.
Evan Essery, Elmer.
Ida J. Eastman, Jackson.
Ida D. Ewer, North Lansing.
Susie Glass, Ypsilanti.
George Lyman Huston, Cherry Hill.
Willard E. Jackson, Gaines Station.
Susie J. Lamb, Ypsilanti.
Andrew J. Lynd, Marlette.
Matilda L. Martin, Calumet.
Mary C. Mullin, Lawton.
Libbie McNeal, Middleville.
Mary McNeal, Middleville.
Emma A. Miller, Belleville.
Charles W. Mickens, Lambertville.
Jennie E. Mount, Union City.
Richard E. Murtha, Salt River.
Mary Nettie Owen, Lowell.
Myra J. Redfield, Adamsville.
Mary Renwick, Ann Arbor.
Jennie Renwick, Ann Arbor.
Dora B. Smith, Charlotte.
Ella R. Smith, Morley.
Willard Gilbert Steward, Taylor.
Rollin L. Thorp, Little Prairie Ronde.
Martha Luella Todd, Jackson.
E. May Taylor, Parma.
Mina Tregellas, Calumet.
Ann Tregellas, Calumet.
Eva Van Volkenburg, Nora Station.
Myra Susan Wells, Wyandotte.
Arthur O. Wilkinson, Ypsilanti.
Mrs. Maria Wormell, Morley.
Winfield S. Webster, Benton Harbor.

ENGLISH COURSES.

Full English.

Frances E. Bird, Romulus.
Emma J. Hinkley, Benton Harbor.
Ella Kyle Laflin, Dearborn.
Ira B. Laflin, Dearborn.

Literary.

Ella D. Gay, Holly.
Kate A. Hoadly, Niles.
Kittie C. Miller, Muskegon.
Nettie E. Wheeler, Nora Station.

Scientific.

Benj. F. Bailey, Manchester.
May M. Clark, Ypsilanti.
Chas. E. Foster, Chelsea.
Silas P. Hutchinson, Napoleon.
Carrie B. Hitchcock, Ph. B., Union.
Gertrude Lockwood, Petersburg.
Mary F. Lockwood, Petersburg.
Albertus Nyland, Holland.
Cora L. Rogers, Ypsilanti.
Miles L. Smith, Lambertville.

LANGUAGE COURSES.

Latin and Greek.

Charles E. Bird, Romulus.
Adelbert D. Edwards, N. Pitcher, N. Y.
Martin Hanlon, Almont.
Walter C. Hewett, Ypsilanti.
Hiram W. Miller, Embro, Ont.
Lawrence A. McLouth, Ypsilanti.
Willis A. Weeks, Leslie.

Latin and German.

Lena A. Beerman, Fruitport.
John Jackson, Portage, O.
Ettie L. Lee, Spring Lake.
Peter T. McKinney, Albion.
Chas. S. Pierce, Bell Branch.
Mabel L. Robinson, Muir.

French and German.

Sarah O. Ball, Hamburg.
Martha L. Robinson, Muir.
Mary J. Silsby, Hamburg.
Mary E. Webb, Manchester.

Literary and German.

Mary A. Bachman, Muskegon.

Literary and French.

Carrie W. Norton, Charleston, O.

Literary and Latin.

Lillian I. Grimes, Ganges.

Scientific and Latin.

Elliott Eugene Kidney, Ph. B., Oakley.

For a more detailed account of the work of the Normal School during the past year, you are referred to the accompanying report of the Acting Principal, and for information concerning the finances of the School you are referred to the annexed report of the Treasurer.

In conclusion, the State Board of Education expresses the confident opinion

that the work of the Normal School is constantly improving, and that its influence is widening. Already many of its graduates have attained to eminence in the teacher's profession, both in Michigan and in other States. There is hardly a village or a township in the State that does not employ a teacher who has, in whole or in part, prepared for his work at the Normal School. Very few who have graduated from the School fail to secure good positions or to maintain themselves in them.

STATE CERTIFICATES.

In accordance with what seemed to be the spirit and intent of Act No. 231, laws of 1879, relative to State certificates, the Board adopted the following regulations to govern the issuance of such certificates:

1. Two kinds of certificates will be issued: One to such persons as shall be invited to apply, and the other to successful candidates at regular examinations held by the Board.

2. *Invitations* will be extended only to such persons as are known to be eminent as scholars and successful educators, of large and varied experience in the public schools of the State, and who, at the time the certificates are issued, shall be engaged in that work; but not more than five such certificates shall be granted in any one year. Each of those invited to apply for this certificate will be required to read before the Board, and to deposit with the Secretary, a thesis upon some educational topic.

3. Candidates for *examination* must comply with the following conditions:

a. They must furnish satisfactory evidence of good moral character;

b. They must furnish satisfactory evidence of having taught not less than thirty months with decided success, at least ten months of which shall have been in this State;

c. They must pass a very thorough examination in orthography, reading, penmanship, arithmetic, algebra, plane geometry, grammar, geography, U. S. history, civil government, and theory and art of teaching;

d. They must pass a satisfactory examination in school law of Michigan, general history, physical geography, natural philosophy, physiology and hygiene, botany, zoölogy, geology, chemistry, and astronomy;

e. Written testimonials from responsible persons will be required as evidence of good moral character;

f. In respect to length of time taught, the statement of the applicant, giving time, place, and kind of school, will be sufficient;

g. Written testimonials from employers will be required as to success in teaching. The testimony on this point must be clear and explicit;

h. The application, accompanied with the examination fee, together with satisfactory evidence relative to character, length of time taught, and success in teaching, must be furnished at least twenty days before the first day of the examination. Any one whose credentials are unsatisfactory will be promptly informed of that fact, and thereby be saved the expense of attendance upon examination;

i. Papers forwarded as testimonials must in all cases be originals. When copies are sent for filing in this office the originals will be returned, but not otherwise;

j. Both the oral and the written methods of examination will be employed. A definite time will be allowed to each topic, varying with the nature of the subject and the number and character of the questions proposed;

k. Each examination will continue three days, and applicants for certificates must be in attendance through the entire examination.

Applicants invited to read theses must be in attendance the last day of the examination.

No announcement of the results can be made at the immediate close of the examination. The careful review of papers written, and the filling out of certificates, will require several days' time.

Each kind of State certificate entitles the holder to teach in any school district of the State without further examination, and is valid for ten years, provided the personal and professional reputation of the holder remains untarnished.

It is intended by the State Board of Education that these certificates shall be granted only to those who, by their broad culture and successful experience in educational work, have given character and dignity to the profession in this State.

Due publication will be made of the dates of all examinations.
All communications should be addressed to the Secretary of the State Board of Education, Lansing, Michigan.

Under these regulations, and since the passage of the law of 1879, State certificates have been granted as follows:

Upon Invitation.

Miss Julia A. King, Ypsilanti.
C. B. Thomas, A. M., Saginaw.
Charles Kelsey, A. M., Marquette.
H. R. Pattengill, B. S., Ithaca.
E. B. Fairfield, Jr., B. S., Grand Haven.
J. W. Robinson, Manchester.
Miss M. Louise Jones, Charlotte.
Mrs. L. F. Selfridge, Jackson.
E. P. Church, A. M., Greenville.
Z. C. Spencer, A. M., Battle Creek.
M. T. Gass, A. M., Flint.
H. R. Gass, A. M., Jonesville.
Miss Linna Schenck, Fenton.
Varnum B. Cochran, A. M., Marquette.

Upon Examination.

James Warnock, Jr., Spring Lake.
L. O. Chatfield, Mt. Pleasant.
C. E. Swift, Lexington.
W. A. Fallass, M. D., Cedar Springs.
James A. Smith, Evart.
W. W. French, McMillan.
C. C. Wood, Wacousta.
E. J. Wiley, Sault Ste. Marie.
James Brassington, B. S., Hart.

Library Books.

It is made the duty of the State Board of Education to make a selection of books by them deemed suitable for township and district libraries, to revise the list from time time, biennially to advertise for proposals for furnishing the books embraced in the list, and to enter into contract, under the conditions specified in the law, with the lowest responsible bidder, for supplying to officers of township and district libraries ordering them such books as these officers may select. Accordingly the Board, at the proper time, carefully amended the list of books already recommended, adding thereto a large number of such works in all departments of literature as they thought best adapted both to the wants and the purposes of such libraries. The result is, in the opinion of the Board, a list of good books, from which selections may profitably be made. After due advertisment for proposals, the Board awarded the contract to Messrs. Eaton, Lyon & Co., of Grand Rapids, the lowest responsible bidders; and, as directed by law, the Superintendent of Public Instruction issued to the clerks of townships and directors of districts having libraries, a circular containing a list of the books and full information of the contract, accompanying the same with some observations on the nature and policy of the law. This circular is as follows:

STATE OF MICHIGAN,
DEPARTMENT OF PUBLIC INSTRUCTION,
LANSING, 1882.

To Township Boards of School Inspectors, and School District Officers:

In accordance with the provisions of law (section 124, General School Laws of 1881) I send you, hereto annexed, a list of books for township and district libraries. This list is furnished by the State Board of Education, a contract having been made by said Board with Messrs. Eaton, Lyon & Co. of Grand Rapids (the lowest responsible bidders) to supply, at the contract prices named, such books as may be selected from the list by the township and district officers ordering them. These books have been selected with great care, are of the most suitable editions for libraries, are to be furnished in good, substantial binding, and the contractors are to pay the charges for packing and delivery to the railway and express companies. The purpose of the law

which provides for this list is two-fold: 1, to give to officers in charge of school libraries the benefit of a general contract, under which they may purchase books at reduced rates and in a convenient way; and 2, to secure such officers from the danger of purchasing books not suitable for school libraries, by providing them with a carefully prepared list from which to make selections. Should the library fund under your charge be sufficient to purchase a greater number of volumes than you may desire to select from this list, the contractors will furnish, at equally advantageous discounts, such additional books as you may select. For the purpose of aiding you in making selections of additional books, the contractors will be pleased to furnish on application, free of expense to officers in charge of libraries, catalogues of the leading publishing houses. In ordering books *send directly to the contractors named above.*

Under the revised law providing for libraries (Chapter XI, General School Laws of 1881), a township library *must be maintained* in each organized township as the property of the township, the duty of thus maintaining a library being *obligatory* on the township, and the Board of School Inspectors of the township being charged with the care of the library. Any school district having a school census of not less than one hundred children may, by a two-thirds vote at any annual meeting, establish a district library. Districts having less than one hundred children are no longer authorized to establish or to maintain libraries. Such districts that have had libraries under the old law are now authorized to donate or to sell their books to the Township Board of School Inspectors, the same to form a part of the township library. Officers charged with the care of libraries are required to report to the Superintendent of Public Instruction the condition of libraries and the use of library moneys, and if in any instance the reports are not properly made, or it appears that the funds have been unlawfully applied, the offending township or district forfeits its share in the next apportionment of the library fund, the same to be divided among such townships and districts as have complied with the law. In townships, however, where *Township Boards* (not Boards of School Inspectors) shall determine and report to the Superintendent of Public Instruction that the public will be better served by using said money for general school purposes, no such forfeiture shall occur. While it is true that the Township Board may divert the library moneys to general school purposes for any year by so determining, and reporting to this office that such action has been taken, the obligation on the part of the township to establish and to maintain a library is none the less imperative, and such an application of the funds in any year does not relieve the township from its duty in this direction.

The maintenance of school libraries is a duty imposed not only by legislative enactment, but by the organic law of the State (Sec. 12, Art. XIII, of the Constitution), and officers in disregarding this duty, thereby violating the laws, have no excuse. Good books are great blessings, and are among the cheapest and most efficient educational agencies known; consequently, school libraries are justly esteemed as needful and valuable auxiliaries to our public school system. Recognizing these facts, the framers of our Constitution deemed it a subject of great importance to secure the permanent establishment of these libraries, beyond the reach of dissolution and destruction, and it has been the aim of our legislators to make them means of usefulness to our citizens and our children. In the face of all this, it is a deplorable fact that in many of our townships, owing to the culpable neglect of school officers and in direct violation of law, no care has been taken in the matter, and as a consequence not even a vestige of a library can now be found. If proper attention has not been given to this subject in your township or district, I earnestly hope that you will not delay in securing a strict compliance with the law. It is sometimes urged as a reason for neglect in this matter that the public sentiment in the community is not sufficiently enlightened to appreciate properly the benefits to be derived from a school library. This is no excuse. As a school officer you have undertaken to perform the duties required of you by law, and in the performance of these duties *you are obligated to execute faithfully* the law.

Trusting that you may find the annexed list of service, I am,

Very respectfully,

VARNUM B. COCHRAN,
Superintendent of Public Instruction.

LIST OF BOOKS.

BOOKS.	No. Vols.	Catalogue Price.	Contract Price.
HISTORY AND BIOGRAPHY.			
Hildreth's History of the United States	6	$12 00	$7 86
Higginson's Young Folks' United States	1	1 50	1 05
Coffin's Boys of '76	1	3 00	1 95
Coffin's Story of Liberty	1	3 00	1 95
Old Times in the Colonies	1	3 00	1 95
Lodge's English Colonies in America	1	3 00	1 95
Champlin's Young Folks' History of the War for the Union	1	2 75	1 80
Boys of '61	1	2 50	1 60
Campaign Series of the War	12	12 00	7 92
Parkman's Conspiracy of Pontiac	1	2 50	1 70
Parkman's Jesuits in North America	1	2 50	1 70
Parkman's La Salle and the Great West	1	2 50	1 70
Campbell's History of Michigan	1	3 50	2 30
Freeman's Old English History	1	2 00	1 33
Macaulay's History of England	5	3 75	2 25
Green's Shorter History of the English People	1	1 75	1 05
Gardiner's English History for Young Folks	1	1 00	66
Dickens's Child's History of England	1	1 25	58
Student's History of Greece	1	1 25	1 03
Student's Merivale's Rome	1	1 25	1 03
Student's History of France	1	1 25	1 03
Student's History of Germany	1	1 50	1 25
Motley's Dutch Republic	3	6 00	3 93
Motley's Netherlands	4	8 00	5 24
Young Folks' History of the Netherlands	1	1 50	95
Young Folks' History of Russia	1	1 50	95
Young's Remarkable Events in the World's History	1	1 25	65
McCarthy's History of Our Own Times	2	2 50	1 50
Creasy's Fifteen Decisive Battles	1	1 50	98
MacKenzie's History of the Nineteenth Century	1	1 50	98
Wallace's Russia	1	4 00	2 65
Strickland's Stories from History	1	1 25	82
Strickland's Stories from Ancient History	1	1 25	82
Strickland's Stories from Modern History	1	1 25	82
Strickland's Stories from English History	1	1 25	82
Yonge's History of Greece	1	1 50	95
Yonge's History of Rome	1	1 50	95
Yonge's History of France	1	1 50	95
Yonge's History of Germany	1	1 50	95
Yonge's History of England	1	1 50	95
Towle's Adventures and Conquests of Magellan	1	1 00	82
Harrison's Young Folks' History of Spain	1	1 50	95
Harrison's Young Folks' History of India	1	1 50	95
Harrison's Young Folks' History of Switzerland	1	1 50	95
Abbott's Romance of Spanish History	1	2 00	1 31
Bryce's Holy Roman Empire	1	2 00	1 33
The Boy's Froissart (Lanier)	1	3 00	1 95
Prescott's Conquest of Peru	2	$3 00	$1 96
Prescott's Conquest of Mexico	3	4 50	2 94
Prescott's Charles V.	3	4 50	2 94
Holland and its People	1	2 00	1 31
The Epoch Series:			
The Crusades	1	1 00	65
Houses of Lancaster and York	1	1 00	65
The Age of Elizabeth	1	1 00	65
The Age of Anne	1	1 00	65
The French Revolution	1	1 00	65
Plutarch's Lives (Langhorne)	3	4 50	2 55
Froude's Cæsar	1	75	49
Abbott's Founders of Empires	6	6 00	*3 66
Abbott's Early British Kings and Queens	5	5 00	*3 05
Abbott's Queens and Heroines	5	5 00	*3 05
Abbott's Rulers of Later Times	6	6 00	*3 66
Irving's Life of Columbus (Popular Edition)	1	1 75	1 15
Higginson's Young Folks' Book of American Explorers	1	1 50	1 00
Towle's Pizarro	1	1 25	82
Sparks's American Biography	10	12 50	8 20
Irving's Life of Washington (School Edition)	1	2 25	1 48
Life of Alexander Hamilton	1	1 25	82
Parton's Life of Jefferson	1	2 00	1 31
Bigelow's Life of Franklin	3	4 50	2 94
Wirt's Life of Patrick Henry	1	1 50	98
Life of J. Q. Adams	1	1 25	82
Banvard's Life of Webster	1	1 25	80
Greeley's Life of Clay	1	1 25	65
Life of J. C. Calhoun	1	1 25	82
Leland's Lincoln (New Plutarch Series)	1	1 00	66
Chaplin's Life of Sumner	1	1 25	80
Warner's Washington Irving	1	1 25	82
Life of Hawthorne	1	1 00	66
Self-Made Men (Seymour)	1	1 75	1 15
Yonge's Book of Worthies	1	1 25	82
Treadwell's Martin Luther and his Work	1	1 00	66
Jameson's Celebrated Female Sovereigns	1	1 25	65
Macaulay's Frederick the Great	1	60	40
Smiles's Lives of the Stephensons	1	3 00	1 95
Smiles's Life of a Scotch Naturalist	1	1 50	98
Lamartine's Oliver Cromwell	1	60	40
Lockhart's Life of Scott	2	2 50	1 66
Trevelyan's Life of Macaulay	1	1 75	1 15
Thomas Carlyle (M. D. Conway)	1	1 00	65
English Men of Letters (Edited by John Morley):			
Johnson	1	75	49
Gibbon	1	75	49
Scott	1	75	49
Shelley	1	75	49
Hume	1	75	49
Goldsmith	1	75	49
Defoe	1	75	49
Burns	1	75	49
Spencer	1	75	49
Thackeray	1	75	49
Burke	1	75	49
Milton	1	75	49
Southey	1	75	49
Chaucer	1	75	49
Bunyan	1	75	49
Cowper	1	75	49

* Or 61 cents per volume.

LIST OF BOOKS—CONTINUED.

BOOKS.	No. Vols.	Catalogue Price.	Contract Price.
English Men of Letters—Continued:			
Pope	1	$0 75	$0 49
Byron	1	75	49
Locke	1	75	49
Wordsworth	1	75	49
Dryden	1	75	49
Landon	1	75	49
De Quincey	1	75	49
Lamb	1	75	49
Bentley	1	75	49
TRAVELS, DISCOVERIES, AND ADVENTURES.			
Our New Way Around the World	1	2 50	1 60
Field's Journey Round the World	2	4 00	*2 62
Mrs. Brassey's Around the World in the Yacht Sunbeam	1	1 50	90
Parkman's Oregon Trail	1	2 50	1 70
Richardson's The Yellowstone	1	1 50	98
Nordhoff's California	1	2 50	1 31
Nordhoff's California, Oregon, and Sandwich Islands	1	2 50	1 65
Bayard Taylor's Travels	11	16 50	†10 78
Rollo's Tour in Europe	10	10 00	6 50
Dilke's Greater Britain	1	1 00	65
Thackeray's Irish Sketch Book	1	1 25	80
Thackeray's Paris Sketch Book	1	1 25	80
Hay's Castilian Days	1	2 00	1 31
Hilliard's Six Months in Italy	1	2 00	1 31
Zig-Zag Journeys in Europe	1	2 25	1 45
Zig-Zag Journeys in the Orient	1	2 25	1 45
Zig-Zag Journeys in Classic Lands	1	2 25	1 45
Warner's In the Levant	1	2 00	1 31
Warner's My Winter on the Nile	1	2 50	1 65
Vincent's Land of the White Elephant	1	3 50	2 30
Vincent's Through and Through the Tropics	1	1 50	98
Curtis's Howadji in Syria	1	1 50	98
Curtis's Nile Notes of a Howadji	1	1 50	98
Life and Travel in Tartary, Thibit, and China	1	1 00	65
Burnaby's Ride to Khiva	1	2 00	1 31
The Land of the Midnight Sun	2	7 50	4 90
Kingsley's Christmas in the West Indies	1	2 00	1 33
Livingstone's Travels and Last Journals	1	2 50	1 65
Livingstone's South Africa	1	4 50	2 95
Stanley's Through the Dark Continent	2	10 00	6 40
Benjamin's Atlantic Islands	1	3 00	1 95
What Mr. Darwin Saw, etc.	1	3 00	1 95
Griffis's The Mikado's Empire	1	4 00	2 60
Doolittle's Social Life of the Chinese	2	3 50	2 30
Butterfield's Discovery of the Northwest	1	1 00	66
Hale's Stories of Adventure	1	90	60
Dana's Two Years Before the Mast (New Edition)	1	1 50	98
Du Chaillu's Apingi Kingdom	1	1 50	95
Du Chaillu's Lost in the Jungle	1	1 50	95
Du Chaillu's Stories of the Gorilla Country	1	1 50	95
Du Chaillu's Life Under the Equator	1	1 50	95
Du Chaillu's Country of the Dwarfs	1	$ 1 50	$0 98
Butler's Wild North Land	1	1 75	1 15
SCIENCES, POLITICS, ETC.			
Newcomb's Popular Astronomy (Fourth Edition)	1	2 50	1 10
Proctor's Half-Hours with the Telescope	1	1 25	82
Tyndall's Fragments of Science	1	2 50	1 65
Abbott's Science for the Young	4	6 00	3 80
Faraday's Chemical History of a Candle	1	1 00	66
Faraday's Physical Forces	1	1 00	66
Science Primers:			
Physics—Balfour Stewart	1	50	34
Physical Geography—Geike	1	50	34
Physiology—M. Foster	1	50	34
Astronomy—J. N. Lockyer	1	50	34
Geology—Geike	1	50	34
Political Economy—Jevons	1	50	31
Buckley's Fairy Land of Science	1	1 50	98
Buckley's Life and Her Children	1	1 50	98
A World of Wonders	1	2 00	1 31
Naturalist's Voyage Round the World	1	2 00	1 31
Pitman's Alcohol and the State	1	1 50	1 05
Johnston's American Politics	1	75	49
Nordhoff's Politics for Young Americans	1	88	63
FICTION.			
Miss Alcott's Little Women	2	3 00	1 98
Miss Alcott's Little Men	1	1 50	98
Miss Alcott's An Old-Fashionod Girl	1	1 50	98
Aldrich's Prudence Palfrey	1	1 50	98
Aldrich's Stillwater Tragedy	1	1 50	98
Mrs. Alexander's Which Shall It Be?	1	1 00	68
Auerbach's On the Heights	2	2 00	1 32
Bjornsen's Happy Boy	1	1 00	65
Wm. Black's Daughter of Heth	1	1 25	82
Wm. Black's Princess of Thule	1	1 25	82
Bronte's Jane Eyre	1	1 25	70
Bronte's Shirley	1	1 25	70
Bronte's Villette	1	1 25	70
Bronte's Professor	1	1 25	70
Bulwer's Kenelm Chillingly	1	1 25	55
Bulwer's The Last of the Barons	1	1 25	80
Bulwer's Last Days of Pompeii	1	1 25	55
Mrs. Burnett's Fair Barbarian	1	1 00	65
Mrs. Burnett's That Lass o' Lowrie's	1	1 50	98
Cable's Old Creole Days	1	1 00	65
Mrs. Charles's Schonberg Cotta Family	1	1 00	68
Mrs. Charles's Kitty Trevelyan	1	1 00	68
Cooper's Leather Stocking Tales	1	2 00	1 25
Dickens's Works, Complete (Universe Edition)	14	10 50	6 72
Dickens's Works, Complete (Carleton's Edition)	15	22 50	12 00
Benj. Disraeli's Endymion	1	1 00	60
Benj. Disraeli's Lothair	1	1 25	82
Eber's Uarda	2	1 50	1 04
Eber's Egyptian Princess	2	1 50	1 04
Eber's Emperor	2	1 50	1 04
George Eliot's Adam Bede	1	1 00	70

* Or $1.31 per volume.
† Or 98 cents per volume.

LIST OF BOOKS.—CONTINUED.

BOOKS.	No. Vols	Catalogue Price.	Contract Price.
George Eliot's Daniel Deronda	1	$1 00	$0 70
George Eliot's Felix Holt	1	1 00	70
George Eliot's Middlemarch	1	1 00	70
George Eliot's Mill on the Floss	1	1 00	70
George Eliot's Romola	1	1 00	70
George Eliot's Scenes of a Clerical Life	1	1 00	70
George Eliot's Silas Marner	1	1 00	70
Hawthorne's Marble Faun	1	2 00	1 31
Hawthorne's House of Seven Gables	1	2 00	1 31
Hawthorne's Mosses from an Old Manse	1	2 00	1 31
Hawthorne's Twice-Told Tales	1	2 00	1 31
Dr. J. G. Holland's Sevenoaks	1	1 25	82
Dr. J. G. Holland's Nicholas Minturn	1	1 25	82
Dr. J. G. Holland's Arthur Bonnicastle	1	1 25	82
Holmes's Elsie Venner	1	2 00	1 31
Holmes's Guardian Angel	1	2 00	1 31
Miss Howard's One Summer	1	1 25	82
Howells's Foregone Conclusion	1	1 50	98
Howells's Chance Acquaintance	1	1 50	98
Howells's Lady of the Aroostook	1	1 50	98
Howells's Undiscovered Country	1	1 50	98
Victor Hugo's Les Miserables	1	1 50	90
Jean Ingelow's Off the Skelligs	1	1 50	98
Kingsley's Hypatia	1	1 00	65
Kingsley's Westward Ho	1	1 00	65
Longfellow's Hyperion	1	40	26
MacDonald's Sir Gibbie	1	1 25	82
MacDonald's Robert Falconer	1	1 75	95
MacDonald's David Elginbrod	1	1 75	95
MacDonald's Seaboard Parish	1	1 75	95
MacDonald's Annals of a Quiet Neighborhood	1	1 75	95
Muhlbach's Josephine	1	1 00	65
Muhlbach's Frederick the Great	1	1 00	65
Muhlbach's Joseph II and his Court	1	1 00	65
Miss Mulock's Woman's Kingdom	1	1 25	82
Miss Mulock's John Halifax, Gentleman	1	1 25	82
Jane Porter's Scottish Chiefs	1	1 00	55
Jane Porter's Thaddeus of Warsaw	1	1 00	55
E. P. Roe's From Jest to Earnest	1	1 50	98
E. P. Roe's Opening of a Chestnut Burr	1	1 50	98
E. P. Roe's Knight of the Nineteenth Century	1	1 50	98
Scott's Ivanhoe	1	1 00	55
Scott's Kenilworth	1	1 00	55
Scott's Old Mortality	1	1 00	55
Scott's Guy Mannering	1	1 00	55
Scott's Antiquary	1	1 00	55
Scott's Rob Roy	1	1 00	55
Saintine's Picciola	1	1 50	65
Thackeray's Vanity Fair	1	1 25	75
Thackeray's Newcomes	1	1 25	75
Thackeray's Virginians	1	1 25	75
Thackeray's Pendennis	1	1 25	75
Tourgee's Fool's Errand	1	1 25	65
Mrs Whitney's We Girls	1	1 50	98
Mrs. Whitney's Other Girls	1	1 50	98
Mrs. Whitney's Real Folks	1	1 50	98
Mrs. Whitney's Leslie Goldthwaite	1	$1 50	$0 98
Mrs. Whitney's Sights and Insights	2	3 00	1 96
Arabian Nights	1	1 00	55
Rasselas (Bayard Series)	1	1 00	66
Robinson Crusoe	1	1 00	55
Tom Brown at Rugby	1	1 00	55
Uncle Tom's Cabin (New Edition)	1	2 00	1 31
Vicar of Wakefield, and Paul and Virginia	1	1 00	55
Warren's Ten Thousand a Year	1	1 50	95
POETRY AND THE DRAMA.			
Bryant's Poetical Works	1	2 00	1 31
Dryden's Poetical Works (Globe Edition)	1	1 25	70
Goldsmith's Select Poems (Rolfe)	1	70	48
Longfellow's Poetical Works	1	2 00	1 31
Milton's Poetical Works	1	1 25	70
Scott's Poetical Works	1	1 25	70
Shakespeare's Select Plays (Rolfe)	25	15 00	*12 00
Tennyson's Poetical Works	1	2 00	1 31
Ward's English Poets (Student's Edition)	4	4 00	3 08
Whittier's Poetical Works	1	2 00	1 31
Whittier's Child Life	1	2 25	1 48
Wordsworth's Select Poems (Arnold)	1	1 25	83
MISCELLANEOUS.			
Ancient Classics for English Readers:			
Cicero	1	1 00	65
Horace	1	1 00	65
Virgil	1	1 00	65
Homer	2	2 00	1 30
Plato	1	1 00	65
Xenophon	1	1 00	65
Chambers's Miscellany	10	7 50	4 90
Church's Stories from Virgil	1	2 00	1 31
Church's Stories from the Greek Tragedians	1	2 00	1 31
Church's Stories from Homer	1	1 25	82
The Boy's Mabinogion (Lanier)	1	3 00	1 85
The Boy's King Arthur (Lanier)	1	3 00	1 95
Palgrave's Golden Treasury	1	1 25	83
Yonge's Book of Golden Deeds	1	1 25	83
The Fairy Book	1	1 25	83
Alice's Adventures in Wonderland	1	1 50	1 15
Æsop's Fables	1	1 25	82
Sandford and Merton (Day)	1	1 00	66
Childhood (Little Classics)	1	1 00	65
Grimm's Popular Tales	1	1 25	65
Grimm's Stories for the Household	1	1 25	65
Lamb's Tales from Shakespeare	1	1 00	55
Mrs. Diaz's William Henry Letters	1	1 50	65
Mrs. Diaz's William Henry and his Friends	1	1 50	65
Home Books:			
Home Grounds	1	60	40
Building a Home	1	60	40
How to Furnish a Home	1	60	40
Home Garden	1	60	40
Home Decoration	1	60	40
Amenities of Home	1	60	40

* Or 48 cents per volume.

LIST OF BOOKS—CONTINUED.

BOOKS.	No. Vols.	Catalogue Price.	Contract Price.	BOOKS.	No. Vols.	Catalogue Price.	Contract Price.
Smiles's Character	1	$1 00	$0 60	Irving's Conquest of Grenada	1	$1 25	$0 65
Smiles's Thrift	1	1 00	60	Irving's Sketch Book	1	1 25	70
Smiles's Self-Help	1	1 00	60	Hawthorne's Wonder-Book	1	1 25	82
Emerson's Conduct of Life	1	1 50	98	Hawthorne's Tanglewood Tales	1	1 25	82
Emerson's Representative Men	1	1 50	98	Hawthorne's True Stories	1	1 25	82
Bacon's Essays	1	1 00	69	Hans Christian Andersen's Stories and Tales	1	1 50	98
Dowden's Shakespeare, His Mind and Art	1	1 75	1 15	Hans Christian Andersen's Wonder Stories	1	1 50	98
Lamb's Essays of Elia	1	1 50	98	Holmes's Poet at the Breakfast Table	1	2 00	1 31
Matthews's Hours with Men and Books	1	1 50	1 10	Holmes's Autocrat at the Breakfast Table	1	2 00	1 31
Macaulay's Miscellanies	5	10 00	6 55	Holmes's Professor at the Breakfast Table	1	2 00	1 31
Bunyan's Pilgrim's Progress	1	1 00	55	Lowell's Among My Books	2	4 00	2 62
Hinsdale's Garfield and Education	1	1 50	98	Lowell's My Study-Window	1	2 00	1 31
Teft's Speeches of Webster	1	1 25	65	Mitchell's Dream Life	1	1 75	1 15
Tyler's American Literature	1	3 00	1 95	Mitchell's Reveries of a Bachelor	1	1 75	1 15
Irving's Knickerbocker	1	1 25	70	Hamerton's Chapters on Animals	1	2 00	1 31
Irving's Alhambra	1	1 25	65				
Irving's Bracebridge Hall	1	1 25	65				
Irving's Tales of a Traveler	1	1 25	65				
Irving's Wolfert's Roost	1	1 25	65				

EXAMINATION QUESTIONS.

Agreeably to provisions of law, the Board has prepared and furnished to the proper examining authorities, in March and October, sets of questions for use in the examination of teachers throughout the State. Although the law does not make it obligatory upon examiners to make use of these questions, yet they have generally been ready to avail themselves of this assistance, and the result has been nearer an approximation to uniformity in examining and marking than could otherwise be readily attained.

In conclusion, it is but just to remark that the Board, in the discharge of all the duties incident to the various relations imposed on it by the law, has constantly been mindful of the responsible nature of the trusts confided to it, and has sought, while never acting counter to the plain dictates of the law, always to construe its powers most favorably to the important and delicate interests committed to its charge. And finally, sincere acknowledgment is made by the members of the Board of the uniform courtesy and coöperation with which their efforts have been met by the faculty of the Normal School, and by all with whom they have been officially brought in contact.

Respectfully submitted,

GEORGE F. EDWARDS,
EDGAR REXFORD,
BELA W. JENKS,
VARNUM B. COCHRAN,
State Board of Education.

A.

REPORT OF THE ACTING PRINCIPAL, FOR THE SCHOOL YEAR 1881-82.

To the Honorable Board of Education:

GENTLEMEN,—In accordance with the requirements of law and custom, I present this report of the Normal School for the school year 1881–2. Circumstances do not call for any extended statements beyond the statistics and details demanded by the statute relating to educational institutions.

Upon the resignation and departure of the late Principal, Dr. MacVicar, you devolved the general direction and management of the School upon me as Acting Principal, with Prof. McLouth as assistant. The labor and, as far as possible, the responsibility of administration was divided between us.

While the situation was, in some respects, anomalous, I am happy to say that the utmost harmony characterized the work of the year. Apparently the interests of the institution did not suffer harm.

The number of pupils in attendance was somewhat larger than during the previous year, and the deportment of the students and their attention to study were generally satisfactory.

The completion of the building for the use of the training department, and other circumstances seem to open the way for an increase in the patronage, and an extension of the usefulness of the School.

The statistics and details following have been arranged to meet the requirements of the law.

PROFESSORS AND INSTRUCTORS.

Daniel Putnam, M. A., Acting Principal, Elementary Principles of Education, and Director of the Practice School.
Lewis McLouth, M. A., Ph. D., Assistant Principal, Natural Sciences.
Julia A. King, Preceptress, Botany and History.
Frederic H. Pease, Vocal and Instrumental Music, and Director of the Conservatory of Music.
Charles Fitz Roy Bellows, M. A., C. E., Mathematics.
Joseph P. Vroman, M. A., Latin and Greek Languages.
August Lodeman, German and French Languages.
Austin George, M. A. English Language and Literature.
Helen Post, Grammar Department of Practice School.
Fanny E. Goffe, Drawing, Penmanship, and Book-keeping.
Ann Janette Bignell, Primary Department of Practice School.
Ada MacVicar, Instructor in Music.

The following is a summary of the students in attendance during the year:

Normal Department	330
Practice School:	
Grammar Department	77
Primary Department	112
Aggregate	519
Counted twice by transfer	8
Total	511

COURSES OF INSTRUCTION.

SCIENTIFIC COURSE.

First Year.

FALL TERM.
1. Arithmetic.
2. Grammar and Composition.
3. U. S. History, first ten weeks; General History, second ten weeks.
4. Free Hand and Object Drawing.

SPRING TERM.
1. Algebra.
2. Grammar and Composition.
3. General History, first ten weeks; Botany, second ten weeks.
4. Penmanship, first ten weeks; Zoölogy, second ten weeks.

Second Year.

FALL TERM.
1. Algebra.
2. Mathematical Geography, ten weeks; Physical Geography, ten weeks.
3. Botany, first five weeks; Physiology and School Hygiene, fifteen weeks.
4. Rhetoric.

SPRING TERM.
1. Geometry.
2. English Literature.
3. Elementary Physics.
4. Elements of Vocal Music.

Three Essays on subjects assigned.

Third Year.

FALL TERM.
1. Geometry, with Professional Training.
2. Comparative Zoölogy and Physiology, ten weeks; Book-keeping, ten weeks.
3. Higher Physics, with Professional Training.
4. Principles of Teaching, based upon the constitution and laws of the body and mind.

Three Essays on subjects assigned.

SPRING TERM.
1. Algebra, with Professional Training.
2. Drawing.
3. Professional Training: Arithmetic, ten weeks; Grammar and Composition, ten weeks.
4. Principles of Teaching, ten weeks; School Organization and Government, ten weeks.

Three Essays on subjects assigned.

Fourth Year.

FALL TERM.
1. Professional Training: Reading, ten weeks; Geography, ten weeks.
2. Geology, ten weeks; Professional Training in Physical Sciences, ten weeks.
3. Chemistry.
4. Practice in Teaching.

Three Essays on subjects assigned.

SPRING TERM.
1. Trigonometry and Surveying.
2. Chemistry, with Professional Training, ten weeks; Astronomy, ten weeks.
3. Professional Training in Primary Subjects, ten weeks; Civil Government, ten weeks.
4. Practice in Teaching.

Three Essays on subjects assigned.

LITERARY COURSE.

First Year.

FALL TERM.
1. Arithmetic.
2. Grammar and Composition.
3. U. S. History, ten weeks; General History, ten weeks.
4. Free Hand and Object Drawing.

SPRING TERM.
1. Algebra.
2. Grammar and Composition.
3. General History, ten weeks; Botany, ten weeks.
4. Penmanship, ten weeks; Zoölogy, ten weeks.

Second Year.

FALL TERM.
1. Algebra.
2. General History.
3. Botany, first five weeks; Physiology and School Hygiene, fifteen weeks.
4. Rhetoric.

SPRING TERM.
1. Geometry.
2. English Literature.
3. Elementary Physics.
4. Elements of Vocal Music.
Three Essays on subjects assigned.

Third Year.

FALL TERM.
1. Geometry.
2. Grecian and Roman History.
3. English Literature.
4. Principles of Teaching, based upon the constitution and laws of the body and mind.
Three Essays on subjects assigned.

SPRING TERM.
1. English History with Professional Training.
2. American Literature.
3. Professional Training: Arithmetic, ten weeks; Grammar and and Composition, ten weeks.
4. Principles of Teaching, ten weeks; School Organization and Government, ten weeks.
Three Essays on subjects assigned.

Fourth Year.

FALL TERM.
1. Professional Training: Reading, ten weeks; Geography, ten weeks.
2. General Literature, with Professional Training.
3. Chemistry.
4. Practice in Teaching,
Three Essays on subjects assigned.

SPRING TERM.
1. American History.
2. Advanced Rhetoric with Professional Training.
3. Professional Training in Primary Subjects, ten weeks; Civil Government, ten weeks.
4. Practice in Teaching.
Three Essays on subjects assigned.

LANGUAGE COURSE.

First Year.

FALL TERM.
1. Arithmetic.
2. Latin or German.
3. U. S. History, ten weeks; General History, ten weeks.
4. Free Hand and Object Drawing.
Three Essays on subjects assigned.

SPRING TERM.
1. Algebra.
2. Latin or German.
3. General History, ten weeks; Botany, ten weeks.
4. Elements of Vocal Music.
Three Essays on subjects assigned.

Second Year.

FALL TERM.
1. Algebra.
2. Latin or German.
3. Greek or French.
4. Rhetoric.
Three Essays on subjects assigned.

SPRING TERM.
1. Geometry.
2. Latin or German.
3. Elementary Physics.
4. Greek or French.

Three Essays on subjects assigned.

Third Year.

FALL TERM.
1. Geometry, ten weeks; Physiology, ten weeks.
2. Latin or German.
3. Greek or French.
4. Principles of Teaching, based upon the constitution and laws of the body and mind.

Three Essays on subjects assigned.

SPRING TERM.
1. Latin or German.
2. Greek or French.
3. Professional Training: Arithmetic, ten weeks; Grammar and Composition, ten weeks.
4. Principles of Teaching ten weeks; School Organization and Government, ten weeks.

Three Essays on subjects assigned.

Fourth Year.

FALL TERM.
1. Latin or German, with Professional Training.
2. Greek or French, with Professional Training.
3. Chemistry.
4. Practice in Teaching.

Three Essays on subjects assigned.

SPRING TERM.
1. Latin or German.
2. Greek or French.
3. English Literature.
4. Practice Teaching.

Three Essays on subjects assigned.

ART COURSE.

First Year.

FALL TERM.
1. Arithmetic.
2. Grammar and Composition.
3. U. S. History, ten weeks; General History, ten weeks.

Free Hand and Object Drawing.

SPRING TERM.
1. Algebra.
2. Grammar and Composition.
3. General History, ten weeks; Botany, ten weeks.
4. Penmanship, ten weeks; Zoölogy, ten weeks.

Second Year.

FALL TERM.
1. Algebra.
2. Penmanship, with Professional Training.
3. Botany, first five weeks; Physiology and School Hygiene, fifteen weeks.
4. Rhetoric.

SPRING TERM.
1. Geometry.
2. English Literature.
3. Elementary Physics.
4. Elements of Vocal Music.

Three Essays on subjects assigned.

Third Year.

FALL TERM.
1. Geometry.
2. Advanced Vocal Music.
3. Free Hand and Object Drawing,
4. Principles of Teaching, based upon the constitution and laws of the body and mind.

Three Essays on subjects assigned.

SPRING TERM.
1. Harmony, and Literature of Music.
2. Drawing, with Professional Training.
3. Professional Training: Arithmetic, ten weeks; Grammar and Composition, ten weeks.
4. Principles of Teaching, ten weeks; School Organization and Government, ten weeks.

Three Essays on subjects assigned.

Fourth Year.

FALL TERM.
1. Drawing.
2. Professional Training in Music.
3. Chemistry.
4. Practice in Teaching.

Three Essays on subjects assigned.

SPRING TERM.
1. Drawing.
2. Voice Culture and Professional Training in Teaching Music.
3. Professional Training in Primary Subjects, ten weeks; Civil Government, ten weeks.
4. Practice in Teaching, ten weeks.

Three Essays on subjects assigned.

COMMON SCHOOL COURSE.

First Year.

FALL TERM.
1. Arithmetic.
2. Grammar and Composition.
3. U. S. History, ten weeks; General History, ten weeks.
4. Free Hand and Object Drawing.

SPRING TERM.
1. Algebra.
2. Grammar and Composition.
3. Elements of Vocal Music.
4. Penmanship and Drawing, with Professional Training.

Second Year.

FALL TERM.
1. Elementary Principles of Teaching.
2. Professional Training: Reading, first five weeks; Physiology and School Hygiene, fifteen weeks.
3. Geography, with Professional Training.
4. Algebra, ten weeks; Practice in Teaching, ten weeks.

Three Essays on subjects assigned.

SPRING TERM.
1. Elementary Principles of Teaching, ten weeks; School Organization and Government, ten weeks.
2. Professional Training: Arithmetic, ten weeks; Grammar and Composition, ten weeks.
3. Professional Training in Primary Subjects, ten weeks; Civil Government, ten weeks.
4. Practice in Teaching.

Three Essays on subjects assigned.

SPECIAL COURSES.

Latin, German, or French may be substituted for other subjects in each course, as follows:

SCIENTIFIC COURSE.

FIRST YEAR. In the place of Grammar and Composition. In this case Vocal Music must take the place of Penmanship and Zoölogy.

SECOND YEAR. Fall Term, in the place of Mathematical and Physical Geography; Spring Term, in the place of Vocal Music.

THIRD YEAR. Fall Term, in the Place of Comparative Zoölogy, and Physiology and Book-keeping; Spring Term, in the place of Algebra, with Professional training.

FOURTH YEAR. Fall Term, in the place of Geology and Professional Training in Geography; Spring Term, in the place of Civil Government, and Professional Training in Primary Subjects.

LITERARY COURSE.

FIRST YEAR.	In the place of Grammar and Composition. In this case Vocal Music must take the place of Penmanship and Zoölogy.
SECOND YEAR.	Fall Term, in the place of General History; Spring Term, in the place of Vocal Music.
THIRD YEAR.	Fall Term, in the place of Grecian and Roman History; Spring Term, in the place of American Literature.
FOURTH YEAR.	Fall Term, in the place of General Literature; Spring Term, in the place of Civil Government and Professional Training in Primary Subjects.

ART COURSE.

FIRST YEAR.	In the place of Grammar and Composition. In this case Vocal Music must take the place of Penmanship and Zoölogy.
SECOND YEAR.	Fall Term, in the place of Penmanship, including Professional Training; Spring Term, in the place of Vocal Music.
THIRD YEAR.	Fall Term, in the place of Free Hand and Object Drawing; Spring Term, Voice Culture and Professional Training in Reading.
FOURTH YEAR.	Fall Term, Shading; Spring Term, Architectural Drawing.

BOOKS USED FOR INSTRUCTION AND REFERENCE.

MATHEMATICS.

Arithmetic for Teachers—Bellows. El. Algebra—Bellows. Higher Algebra—Olney. Geometry—Bellows. Trigonometry—Bellows.

ENGLISH LANGUAGE AND LITERATURE.

Grammar—Swinton. Elements of Rhetoric—Hill. Science of Rhetoric—Hill. English Literature—Shaw. American Literature—Royse. Universal Literature—Botta.

NATURAL AND PHYSICAL SCIENCES.

Physiology—Brown. Zoölogy—Tenney, Orton. Botany—Wood, Gray. Natural Philosophy—Cooley, Gillett, and Rolf. Easy Experiments, etc.—Cooley. Chemistry—Youmans. Geology—Dana.

MUSIC AND DRAWING.

Drawing—White, Bartholomew. Elements of Vocal Music—Perkins, Tonic Sol-fa Reader. Selected Choruses—Harmony Manual, Pease and Hewitt. Voice Culture—Scharfe's Method, Solfeggi from Marchesi, etc.

HISTORY.

United States History—Barnes, Ridpath (complete), Ridpath (academic), Lossing Quackenbos, Anderson, Goodrich, Higginson, Berard.

General History—Freeman, Swinton, Anderson.

Reference—Green's Short History, Lancaster, Leighton, Smith's Student Series, Epoch Series.

Greek and Roman—No text-books. Library — all standard histories: Curtius, Mommsen, Knight, Cox, Grote, Smith's Series, etc.

English History—No text-book. Library—all standard works: Green, Mahon, Freeman, Lingard, Ranke, Macaulay, Hume, etc.

American History—No text-book. Library: Hamilton, Bancroft, Hildreth, Biographies, Eliot's Debates, etc.

MODERN LANGUAGES AND LITERATURE.

German—Whitney's Grammar; Storme, Select Stories; Lodeman, Conversation Tables; Lessing, Minna von Barnhelm; Goethe, Hermann and Dorothea, Prose, Iphigenie; Schiller, Tell, Wallenstein; Grimm's Essays; Modern Prose Writers.

French—Ploetz, Method; Chardenal's Exercises for Advanced Pupils; Michelet, Jeanne d'Arc; Corneille, Le Cid; Moliere, Le Misanthrope; Mme. de Girardin, La Joie fait Peur; Legouvé, La Lecture en Action.

Remark—Some classes will substitute works by other writers for those above mentioned, or will read some additional work.

ANCIENT LANGUAGES AND LITERATURE.

Text-Books.

Latin Grammar—Allen & Greenough, or Harkness. First Lessons in Latin—Jones. Cæsar—Allen & Greenough. Cicero—Allen & Greenough. Virgil—Frieze. Horace—Lincoln. Lat. Prose Comp.—Jones. Greek Grammar—Goodwin, or Hadley. First Greek Book—White. Xenophon's Anabasis—Goodwin, White, or Boise. Sketches from Historians—Boise, Freeman. Homer's Illiad—Boise. Greek Prose Comp.—Jones.

Books of Reference.

Roby's Latin Grammar, Madvig's Latin Grammar, Zumpt's Latin Grammar, Andrews & Stoddard's Latin Grammar, Gildersleeve's Latin Grammar, Chase and Stuart's Latin Grammar, Bartholomew's Latin Grammar, Buttman's Greek Grammar, Kühner's Greek Grammar, Curtius's Greek Grammar and Elucidations, Crosby's Greek Grammar, Taylor's Greek Grammar, Sophocles's Greek Grammar, Goodwin's Greek Moods and Tenses, Madvig's Greek Syntax, Curtius's Greek Etymology, Papillon's Comparative Philology, Piele's Introduction to Greek and Latin Etymology, Smith's Dict. Biography and Mythology, Smith's Dict. Geography, Smith's Dict. Antiquities, Long's Classical Atlas, Anthon's Classical Lexicon, Kiepert's Classical Maps, Symond's Greek Poets, Mahaffy's History Greek Literature, Cruttwell's History Latin Literature, Harper's Latin Lexicon, Liddell and Scott's Greek Lexicon (large edition), Yonge's English-Greek Lexicon, Auteurieth's Homeric Lexicon, Schlieman's Troy & Mycenæ, Davis's Excavations at Carthage, Gladstone's Time and Place of Homer, Smith's History of Greece, Curtius's History of Greece, Mommsen's History of Rome, Merivale's History of Rome, Liddell's History of Rome, Murray's Manual of Mythology, Schleicher's Compendium of Indo-European Languages, Marshall's Table of Greek Irregular Verbs, Ginn & Heath's Parallel Rules of Greek and Latin Syntax.

PRINCIPLES OF EDUCATION.

Outlines of Lectures—Putnam. Mental Philosophy—Haven. Intellectual Science—Porter. Intellectual Philosophy—Wayland. Lectures, etc.—Hamilton. Mental Physiology—Carpenter. Education—Spencer. Lectures on Teaching—Fitch. Lectures on Education—Payne. Education as a Science—Bain. Common School Education—Currie. Reports and Lectures—Mann.

In closing this report, I desire to bear testimony to the uniform courtesy and kindness which I have received from my associates in the school, and from members of the Board, during this period of temporary responsibility.

DANIEL PUTNAM,
Acting Principal.

B.

REPORT OF VISITORS.

Hon. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—Your committee beg leave to submit the following report:

We made a joint visit to the Normal School in March, at which time we attended the regular daily recitations, and we were present at the commencement exercises. One of our number also heard recitations on other occasions.

We found the School to be in a prosperous condition. The instructors are energetic and efficient; the pupils are ambitious and intelligent; and an air of cheerfulness and courtesy pervades the whole institution, which tells of wisdom and patience in the management.

We heard recitations in the theory of teaching, Latin, Greek, French, German, history, natural philosophy, English literature, mathematics, and music, in all of which the pupils acquitted themselves with much credit. The work by the pupil-teachers, which we were fortunate enough to witness, was well done. We should have been pleased had we seen more instruction of this character; but the crowded condition of the rooms and the inconvenience incident to the erection of the new building rendered it impracticable at the time. We were gratified to observe that the addition to be devoted to the use of the school of practice and observation was so near completion. It will afford a much needed opportunity for carrying on this most important work of the Normal School.

Valuable additions have been recently made to the library. Large improvement might well be made, however, by placing upon its shelves many works not found in the list. The philosophical apparatus is quite complete. It gave us pleasure to note the attention that is paid to the home manufacture and the extemporizing of simple apparatus.

The best interests of education in the State, as it seems to us, demand that the Normal School shall send forth from its doors the greatest possible number of *trained* teachers. Not to the production of high scholarship, but to the selection of the fit from the unfit, to the acquainting of its pupil-teachers with the best methods in instruction, and to the observation of these at work in charge charge of schools, should the strength of the Normal School be devoted. The holders of its diplomas should be those who have proved themselves capable of successfully handling a school by actual apprenticeship under the eye of a master teacher. Such students should receive professional diplomas in contradistinction to non-professional diplomas which testify as to literary attainments only.

Without intending unfriendly criticism, and by no means intimating that the Normal School is peculiar in the matter, your committee would respectfully suggest the possibility of greater unity in the ordering of affairs in the institution by which there would be less danger of pressure in the separate departments, tending to put too heavy a burden upon the students. There is a possibility of requiring so much to be done that, not only health will be impaired, but there will be want in thoroughness, and hence a lower grade of scholarship will be attained than would result from a more limited scope of study, and a more complete mastery of the subjects pursued.

Respectfully submitted,

Z. C. SPENCER,

WM. A. McCORKLE, *Visitors.*

C.

FINANCIAL EXHIBIT FOR 1881-82.

STATE BOARD OF EDUCATION IN ACCOUNT WITH EDGAR REXFORD, TREASURER.

Salaries.

M. MacVicar	1½	months	$450 00
Daniel Putnam	10	"	2,248 00
F. H. Pease	10	"	1,800 00
Lewis McLouth	10	"	2,201 00
C. F. R. Bellows	10	"	1,800 00
A. Lodeman	10	"	1,800 00
Austin George	10	"	1,820 00
J. P. Vroman	10	"	1,800 00
Julia A. King	10	"	1,000 00
Helen M. Post	10	"	700 00
Fanny E. Goffe	10	"	700 00
Ann J. Bignell	10	"	700 00
Lucy A. Osband	1	"	70 00
Ency J. Coleman	1	"	70 00
C. C. Vroman	12	"	666 67
David Edwards	9⅔	"	510 00
			$18,335 67

Current Expense Account.

1881.	No. of Voucher.	To Whom Paid.	Amount.
Oct. 31.	1	Pay Roll 1 month (shown in Salary account)	$2,036 50
Nov. 1.	2	Homer Briggs, hauling 3 loads coke	1 50
	3	Homer Briggs, freight and cartage	3 58
	4	Pennsylvania Coal Co., 256 1506-2000 tons egg coal	1,443 96
	5	Edward Wilson, hauling 256 1506-2000 tons coal	77 03
	6	Edward Wilson, extra labor in hauling 100 tons coal	5 00
	7	Telephone and Telegraph Construction Co.	12 00
	8	American Express Co., express charges	25
	9	American Express Co., express charges	25
	10	American Express Co., express charges	45
	11	American Express Co., express charges	1 25
	12	American Express Co., express charges	45
	13	American Express Co., express charges	25
	14	Homer Briggs, freight and cartage	1 19
	15	American Express Co., express charges	90
	16	C. Smart, tuning three pianos	10 00
	17	M. MacVicar, railroad fare, etc.	3 50
	18	Ypsilanti postoffice, stamps, wrappers, etc.	27 55
	19	Frank Smith, chemicals, stationery, etc	42 24
	20	Stevens & Loomis, hardware, etc.	9 31
Nov. 1.	21	S. H. Dodge, engraving, etc.	2 00
	22	E. Sampson, diploma seals	40
	23	M. Mallion, gas pipe and putting up same	17 90
	24	A. Harvey & Son, 1 set grates	15 00
Nov. 25.	25	Richmond, Backus & Co., stationery	15 85
	26	Richmond, Backus & Co., stationery	10 50
	27	Richmond, Backus & Co., stationery	20 50
	28	John McFarlane, maps, etc.	12 70
	29	Charles Scribner's Sons, maps, etc.	56 43
	30	Charles Scribner's Sons, maps, etc.	4 94
	31	Telephone and Telegraph Construction Co.	8 00
	32	American Express Co., express charges	50
	33	American Express Co., express charges	25
	34	D. Putnam, paid for books, express charges, etc.	23 56
Nov. 30.	35	Pay roll 1 month, (shown in salary account)	1,898 50

Current Expense Account.—Continued.

1881.	No. of Voucher.	To Whom Paid.	Amount.
Dec. 20.	36	Ypsilanti Gas Light Co., 52,500 feet gas	$157 50
	37	Ypsilanti postoffice, stamps and envelopes	6 62
	38	James Smith, 1 day's work	1 50
	39	Post and Tribune Co., 1 page in Michigan Almanac	20 00
	40	Drury and Taylor, stove pipe, etc.	15 00
	41	Drury and Taylor, carpenters' tools	9 50
	42	C. R. Pattison, printing	65 83
	43	Schemmel & Draper, drawing models	1 39
	44	Lewis McLouth, express charges	85
	45	Eberbach & Son, chemicals	14 11
	46	E. Samson, drawing models	19 79
	47	American Express Co., express charges	25
	48	Stevens & Loomis, hardware	6 15
	49	Zabriskie & Thorpe, carpenters' tools	15 50
	50	C. R. Pattison, printing	6 88
	51	Richmond, Backus & Co., catalogue cards	7 50
	52	Normal News, advertising	50 00
	53	Frank Smith, stationery, etc., etc	40 31
	54	Eberbach & Son, chemical apparatus	14 25
	55	Eberbach & Son, chemicals	8 58
	56	Eberbach & Son, chemicals	38 06
	57	Wm. J. Marshall, sciopticon views	15 00
	58	Wallace & Clark, two step-ladders	6 00
	59	C. C. Vroman, paid for help	5 12
	60	C. C. Vroman, paid for wood	17 50
	61	David Edwards, repairing doors	25
	62	A. Lodeman, expenses to Detroit	1 80
	63	E. R. Davis, repairing roof	22 22
	64	J. M. B. Sill, expenses as member of visiting committee	9 35
	65	Carnigie Bros. & Co., two 12-inch beams	35 86
	66	J. & Wm. L. McCullough, castings	16 89
	67	American Express Co., express charges	50
	68	Pay roll, 1 month (shown in salary account)	1,764 00
1882.			
Jan. 11.	69	Lewis McLouth, expenses to New York to purchase apparatus	56 45
Jan. 31.	70	Pay roll, 1 month (shown in salary account)	1,762 00
Feb. 7.	71	American Express Co., express charges	4 85
	72	Mercuess & Davis, repairing doors	5 50
	73	Richmond, Backus & Co., ledger, journal, etc.	19 25
	74	American Express Co., express charges	30
	75	Telegraph and Telephone Const. Co.	24 00
	76	C. C. Vroman, paid for repairs	3 10
	77	James Smith, sawing 4½ cords wood	2 25
	78	James A. Bailey, night watch	12 00
	79	H. M. Post, map	5 00
Feb. 10.	80	American Express Co., express charges	90
Feb. 28.	81	Pay roll, 1 month (shown in salary account)	1,758 00
Mar. 31.	82	American Express Co., express charges	25
	83	Richmond, Backus, & Co., rubber stamp	2 25
	84	A. Harvey & Son, 1 grate	4 50
	85	Robert Curtis, mason work	6 25
	86	James A. Bailey, night watch	12 00
	87	McCullough Bros., iron columns, etc.	83 85
	88	Meyroultz Bros., apparatus	11 50
	89	A. Miner, 7 loads sand	5 25
	90	American Express Co., express charges	2 45
	91	Homer Briggs, freight and cartage	2 63
	92	E. B. Benjamin, apparatus	62 60
	93	Sweet Bros., lumber	45 84
	94	James W. Queen & Co., apparatus	155 05
	95	P. Hascall, setting glass	1 75
	96	David Edwards, paid for labor	306 89
	97	James A. Bailey, night watch	12 00
	98	James Quoquillard, plastering	129 99

Current Expense Account.— Continued.

1882.	No of Voucher.	To Whom Paid.	Amount.
Mar. 31.	99	Pay roll, 1 month (shown in salary account)	$1,764 00
Apr. 14.	100	Homer Briggs, freight and cartage	6 16
	101	Follmor & Scoville, lumber	24 67
	102	A. Lodeman, expenses at Detroit, and paid for Anglia, etc.	9 10
	103	Longbridge & Wilcox, stone	5 20
	104	Telephone and Telegraph Const. Co.	24 00
	105	E. C. Cornwell, extension bells	5 00
	106	American Express Co., express charges	1 30
	107	George Humphrey, work on steam and gas pipes	18 75
	108	John Goodison, reading charts	8 00
	109	Wm. McAndrew, blackboards, etc.	17 90
Apr. 24.	110	Sweet Bros., lumber	15 52
	111	Wm. Reid, glass	4 00
	112	Fanny E. Goffe, paid for drawing models	6 20
	113	Philo Ferrier & Son, 3 pcs. O iron	1 89
	114	Z. C. Spencer, expenses as member of visiting committee	9 00
	115	Daniel Putnam, express charges and expenses	3 24
	116	A. Lodeman, expenses to Detroit	1 80
Apr. 30.	117	Pay roll, 1 month (shown in salary account)	1,760 00
May 31.	118	Pay roll, 1 month (shown in salary account)	1,764 00
June 27.	119	Fanny E. Goffe, paid for drawing models	39 35
	120	Fanny E. Goffe, paid for drawing models	5 05
	121	Homer Briggs, freight and cartage	5 00
	122	Wm. Bourk, 1 day's work	1 00
	123	Moses Lespronce, painting	24 90
	124	James Smith, 2 days' work	3 50
	125	Parsons Bros., lumber	32 03
	126	James A. Bailey, 1½ days' work	1 50
	127	American Express Co., express charges	1 85
	128	Northwestern Summer Institute advertising	20 00
	129	David Edwards, paid for hauling rubbish	23 76
	130	P. Hascall, slating blackboards	25 08
	131	Seth Hardy, repairing side-walks	3 75
	132	James Smith, 2 days' work	3 00
	133	Homer Briggs, freight and cartage	4 64
	134	D. W. Rogers, repairing pump	1 50
	135	James W. Queen & Co., apparatus	85 75
	136	F. E. Brandis, astronomical transit instrument	320 00
	137	Henry Neimann, 2 book cases	35 00
	138	Seth Merceurs, beam-box pattern	75
	139	Otter Lake Lumber Co., lumber	8 99
	140	Ypsilanti Gas Light Co., 133,400 feet gas	400 20
	141	Peninsular Paper Co., paper	5 10
	142	Stevens & Loomis, hardware	11 33
	143	Stevens & Loomis, hardware	30 60
	144	E. Samson, crayons, paper, etc.	1 99
	145	E. Samson, paints and oils	13 69
	146	Follmor & Scoville, lumber	10 88
	147	C. Spencer, stamps and envelopes	30 01
	148	Frank Smith, drawing models	2 80
	149	M. T. Woodruff, printing	3 50
	150	Calvert Lithographing Co., 100 diplomas	80 00
	151	Wm. Reid, glass	4 00
	152	Frank Smith, chemicals, stationery, etc.	88 52
	153	Pay roll one month (shown in salary account)	1,762 00
Sept. 27.	154	Z. C. Spencer, expenses as member of visiting committee	11 50
	155	David Edwards, paid for lumber and labor	70 80
	156	Walter Hewitt, tuning two pianos	10 00
	157	Wm. A. McCorkle, member of visiting committee	8 00
	158	C. C. Vroman, paid help and for repairing pump	9 05
	159	H. D. Wells & Co., one dozen brooms	3 60
	160	Telephone and Telegraph Construction Co.	24 00
	161	H. P. Glover, ribbons for trimming diplomas	3 45
	162	Frank Joslin, drawing contract	1 00

Current Expense Account.—Continued.

1882.	No. of Voucher.	To Whom Paid.	Amount.
Sept.27.	163	C. R. Pattison, printing programmes, catalogues, etc.	$153 38
	164	C. C. Vroman, paid for help, etc.	5 06
	165	Pennsylvania Coal Co., 332 1056-2000 tons egg coal	1,842 21
	166	Edward Wilson, hauling coal, paid for weighing, etc.	125 55
	167	Lewis McLouth, paid for assistance in laboratory	50 00
	168	American Express Co., express charges	6 60
	169	Eberbach & Son, 1 Rhumkorf coil	108 00
	170	Wallace & Clark, 1 table, etc., etc.	4 20
Sept.30.	171	Pay roll one month (shown in salary account)	2,016 67
Disbursements on acct. of current expenses for year ending Sept. 30, 1882..			$25,650 72

DEBIT.

1882.		
Jan. 31.	Transferred to Normal School Library Fund	$1,500 00
Sept. 30.	Current expenses as per above statement	25,650 72
	Balance to new account	1,415 18
		$28,565 90

CREDIT.

1881.		
Sept. 30.	Balance from old account	$1,299 43
Nov. 4.	By cash from State Treasurer	5,851 47
Dec. 31.	By cash from tuition	1,045 00
	By cash from diploma fees	6 00
1882.		
Jan. 13.	By cash from State Treasurer	7,500 00
Apr. 17.	By cash from State Treasurer	6,000 00
June 30.	By cash from tuition	980 00
	By cash from diploma fees	240 00
	By cash from laboratory fees	144 00
July 26.	By cash from State Treasurer	5,500 00
		$28,565 90

Special Funds Account.

STATE BOARD OF EDUCATION IN ACCOUNT WITH EDGAR REXFORD, TREASURER.

1881.	No. of Voucher.	To Whom Paid.	Amount.
Nov. 1.	1	Stangé & Candler, on account new building	$3,002 08
	2	H. Goodspeed, on account new building	949 62
	3	Julius Hess, on account new building	88 50
Nov. 25.	4	Stangé & Candler, on account new building	2,240 27
	5	H. Goodspeed, on account new building	544 85
Dec. 20.	6	Stangé & Candler, on account new building	918 90
	7	H. Goodspeed, on account new building	2,671 85
	8	Julius Hess, on account new building	112 50
Nov. 25.	9	John MacFarlane, on account library	81 05
	10	John MacFarlane, on account library	15 14
	11	John MacFarlane, on account library	152 68
	12	John MacFarlane, on account library	53 04
	13	John MacFarlane, on account library	107 03
	14	John MacFarlane, on account library	128 21
	15	John MacFarlane, on account library	88 71
	16	John MacFarlane, on account library	274 37
	17	Richmond, Backus & Co., on account library	34 29
	18	A. Lodeman, on account library	83 20
	19	J. S. Jenness, on account library	2 60

Special Funds Account.—Continued.

STATE BOARD OF EDUCATION IN ACCOUNT WITH EDGAR REXFORD, TREASURER.

1881.	No. of Voucher.	To Whom Paid.	Amount.
Dec. 20.	20	Thorndike Nourse, on account library	$176 93
	21	John MacFarlane, on account library	53 69
	23	John MacFarlane, on account library	78 94
	23	John MacFarlane, on account library	34 01
	24	Wallace & Clark, on account library	176 00
1882.			
Feb. 7.	25	H. Goodspeed, on account new building	1,190 67
	26	Stangé & Candler, on account new building	222 76
Mar. 31.	27	H. Goodspeed, on account new building	358 50
	28	Stangé & Candler, on account new building	522 92
	29	Detroit Metal and Heating Works, steam heating, on account new building	2,456 59
Feb. 7.	30	A. Lodeman, on account library	27 00
	31	A. Lodeman, on account library	15 25
	32	John MacFarlane, on account library	32 03
Mar. 31.	33	John MacFarlane, on account library	21 60
	34	Thorndike Nourse, on account library	10 35
	35	Jansen, McClurg & Co., on account library	55 77
June 27.	36	Stangé & Candler, on account new building	740 44
	37	H. Goodspeed, on account new building	641 84
	38	H. Goodspeed, on account new building	898 02
	39	Stangé & Candler, on account new building	1,736 51
	40	Julius Hess, on account new building	250 25
Apr. 14.	41	Kirchberg & Keenan, on account library	234 00
	42	The Century Co., on account library	40 00
June 27.	43	John MacFarlane, on account library	846 02
	44	John MacFarlane, on account library	57 08
	45	Thorndike Nourse, on account library	4 06
	46	Henry Nilmann, on account library	9 00
July 27.	47	H. Goodspeed, on account new building	2,329 19
Sep. 26.	48	Julius Hess, on account new building	36 37
Sep. 27.	49	Richmond, Backus & Co., on account library	34 36
		Disbursements for building and other special funds for year ending September 30, 1882	$24,839 49

1882.	DEBIT.	
Sept. 30.	Disbursements as per above statement	$24,839 49
	Balance to new accounts	1,591 61
		$26,431 10

Special Funds Account.—Continued.

CREDIT.

1881.		
Sept. 30.	Balance from old account	$5,931 10
Nov. 4.	By cash from State Treasurer	6,000 00
1882.		
Jan. 13.	By cash from State Treasurer	6,500 00
Sept. 30.	Transferred from current expense to library fund	1,500 00
Apr. 26.	By cash from State Treasurer	6,500 00
		$26,431 10

Ypsilanti, September 30, 1882.

EDGAR REXFORD,
Treasurer.

STATE AGRICULTURAL COLLEGE.

REPORT.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—In compliance with your request and the provisions of law, I have the honor to present the following brief statement relating to the Agricultural College for the year 1882.

I think it best that this report should be brief, on account of the fact that, as the present year marks a quarter of a century in the history of the institution, the reports of the officers of the College for this year as published in the Report of the Secretary of the State Board of Agriculture, are specially full in relation to the various departments of instruction.

The number of students in attendance at the College during the year is as follows:

Resident graduates	2
Seniors	29
Juniors	31
Sophomores	56
Freshmen	82
Specials	21
Total	221

The course of instruction is as follows:

FRESHMAN YEAR.

Autumn Term.—Algebra; Ancient History—Swinton's Outlines; Rhetoric—D. J. Hill.

Spring Term.—Geometry—Olney; Drawing—Morse's Mechanical, Lectures; Agriculture—Lectures.

Summer Term.—Geometry completed; Botany—Gray's Lessons; Wood's Botanist and Florist; Rhetoric—Day's Praxis.

SOPHOMORE CLASS.

Autumn Term.—Alebra completed; Elementary Chemistry—Lectures, Roscoe; Botany, half term; Landscape Gardening, half term—Lectures.

Spring Term.—Trigonometry, half term—Olney; Surveying, half term—Murray; Organic Chemistry—Lectures; Blowpipe and Volumetric Analysis; English Language.

Summer Term.—Mechanics—Peck; Analytical Chemistry—Kedzie's Hand Book, three hours daily. .

JUNIORS.

Autumn Term.—Mechanics completed, half term; Anatomy, half term—Lectures, Martin; Horticulture—Lectures; Agricultural Chemistry—Lectures.

Spring Term.—Human and Comparative Physiology—Lectures, Martin; Chemical Physics—Atkinson's Ganot; Rhetoric—A. S. Hill.

Summer Term.—Entomology—Lectures; Packard, Cook's Apiary; Meteorology—Lectures; English Literature—Lectures, Shaw, Chambers's Cyclopedia.

SENIORS.

Autumn Term.—Zoölogy, half term—Lectures; Geology, half term—Lectures; Civil Engineering—Lectures, Encyclopedia Britannica; Logic—Jevon's Lessons and Fowler's Inductive Logic.

Spring Term.—Psychology—Bascom; Botany—Laboratory work, half term, two hours daily; Constiution of the United States, half term—Cooley; Political Economy.

The commencement exercises took place August 15, 1882. In the baccalaureate sermon, preached on the preceding Sunday, President Abbot set forth the duties which the graduates of the College owe to the State. Eight of the Seniors were chosen by lot to deliver the commencement orations, and the music was furnished by Speil's Orchestra of Detroit.

The degree of Bachelor of Science was conferred upon the following persons, twenty-seven gentlemen and one lady: Lincoln Avery, Blaine; Liberty H. Bailey, Jr., South Haven; Erwin N. Ball, Hamburg; J. Wesley Beaumont, Hart; Alford J. Chappell, Charlotte; Wm. H. Coffron, North Branch; Joseph E. Coulter, Ontonagon; Charles W. Crossman, Benton Harbor; Fred E. Delano, Oxford; John F. Evert, Moorepark; Warren H. Goss, Bangor; Will E. Hale, Eaton Rapids; Lewis B. Hall, Belding; Jacob M. Hollingsworth, Ridge Farm, Ill.; Lucius W. Hoyt, Grand Rapids; Jefferson H. Irish, Pontiac; Wm. T. Langley, Centerville; James L. McClear, Unadilla; Eugene D. Millis, Matherton; Theodore F. Millspaugh, Walden, New York; Edwin A. Murphy, Lyons; Charles B. Plummer, South Haven; John R. Shelton, Owosso; James M. Smith, Hubbardston; Fred C. Snyder, Greenville; Wm. L. Snyder, Greenville; Gaylord W. Thompson, Kensington; Alice Weed, Lansing.

The degree of Master of Science was then conferred on: Frank S. Kedzie, class of 1877, assistant in chemistry, for proficiency in chemistry; William C. Latta, class of 1877, instructor in agriculture, Purdue University, Indiana, for proficiency in agriculture; Charles C. Georgeson, class of 1878, professor of agriculture and horticulture in the Texas Agricultural College, for proficiency in agriculture; James Troop, class of 1878, assistant in horticultural experiments, for proficiency in physiological botany.

The number of graduates was twenty-eight, bringing the total number up to 272. After the conferring of degrees, the graduating class was addressed by his Excellency, Governor Jerome, and by Hon. V. B. Cochran, Superintendent of Public Instruction. The reception given by the president in the evening closed the regular commencement programme. The exercises throughout

were rendered more than usually interesting by the presence, in large numbers, of the alumni. The seventh reunion of the alumni occurre d the day after commencement, Mr. James Satterlee (class of 1869) being president, and Prof. R. C. Carpenter (1873) secretary.

The programme of these exercises follows:

GENERAL EXERCISES.

Business meeting, 8 to 10 A. M., Chemical Lecture Room.
Literary exercises, 10:30 A. M., Chapel.
Review of grounds, etc., with faculty, 2 P. M.
Class meetings, 5 to 7 P. M.: '61 to '70 inclusive, Prof. Cook's study; '71 and '77, Chemical Laboratory; '72 and '73, Prof. Carpenter's study; '74 and '75, College Hall, 3d story; '76 to '78, Botanical Laboratory; '79 and '80, College Hall, 2d story; '81, College Chapel.
Banquet for alumni, 8 P. M., Dining Hall.

PUBLIC EXERCISES, 10:30 A. M.

Music, March from "Nisida," . . . . . *Genee*
Prayer.
Music, Andante from VI Symphony, ... *Haydn*
History, ... Henry A. Haigh, '74
Music, cornet solo, ... *Chickering*
Richard H. Gulley, '78.
Poem, ... Frank Hodgman, '62
Music, Carnival Quadrille, ... *Strauss*
Oration, ... John P. Finley, '73
Music—Song, "Twenty Years Ago," . . . Frank Hodgeman, '62

The "History," by Henry A. Haigh, Esq., '74, was, in part, a touching tribute to the memory of the graduates who have died since the alumni gathering of 1879—George W. Eaton, Dalston P. Strange, John W. Porter, William K. Kedzie, Robert F. Kedzie, George W. Long, William A. Henderson, Lyman Mason, Charles L. Jackson, and Henry E. Owen—graduates endeared to those who knew them, by great excellencies of character, and whom the College could ill afford to spare.

With regard to the officers of the College, there have been no important changes since the report rendered to the Department of Public Instruction for 1881.

Respectfully submitted,

ROBERT G. BAIRD,

Secretary.

INSTITUTION FOR THE EDUCATION OF THE DEAF AND DUMB.*

REPORT OF THE TRUSTEES.

[The following is from the report of the Board of Trustees to the Legislature, and covers the year ending September 30, 1882:]

During this time the school has been in successful operation. The number of pupils in attendance has taxed the capacity of the present buildings to their fullest extent. We require more room. Two hundred and fifty pupils are all that can be accommodated comfortably in the present buildings. For the year 1882–3 the enrollment reaches 262, and would be 275 if we could crowd them into the buildings. Either changes in the present buildings must be made, or new ones erected, before a larger number of pupils can be admitted than at present in the school.

We recommend that an appropriation be made for an additional building to accommodate the increasing number of children seeking admission. But not having made any estimates, and having no definite plans to submit at the present time, we leave this for action by legislative committee at their biennial visit during the coming winter.

In compliance with Act No. 233, laws of 1881, providing for the appointment of a superintendent, the board at the close of the last school year appointed Dan. H. Church to that position. Mr. Church has been connected with the institution as steward for nine years, and has shown himself worthy of this promotion. He is a man of good executive abilities, and will, in his present position, relieve the principal of all duties except those pertaining to the educational department. He has entire charge of the business interest of the institution, including the industrial departments of farm and shops, the keeping of the books, purchasing of supplies, and all the work formerly performed by the steward.

They have placed the educational department under the direction and control of F. A. Platt as principal. He is a graduate of Michigan University, and for many years a successful teacher in this institution. Under the present arrangement we expect to get more efficient service in both departments without any additional expense.

The education received by the pupils in the industrial departments is of equal, if not of more value, than that taught in the school-rooms. Many boys who are dull in their studies make the best mechanics and tradesmen.

* The annual report to the Superintendent of Public Instruction, required by section 2, Act No. 206, Laws of 1881, not having been received, the report here presented has been compiled at this office.—SUPT. PUB. INSTRUCTION.

We teach them cabinet making, boot and shoe making, printing, baking, and farming, always impressing upon their minds that honest labor, in whatever field, dignifies both manhood and womanhood. Very few paupers or criminals are found in our poor-houses and jails, who have been taught trades when young. There are more who can read and write than there are of the other class. This argues the very great importance of industrial education. The girls are taught sewing, cutting and fitting of garments, and general housework. They grow into habits of neatness and cleanliness, and learn methods of doing things which are of great service to them in after life.

The graduates of this institution will compare favorably in literary attainments with those of the high schools of our State, while in ability to earn a living, and become self-supporting, we think they surpass any equal number of speaking pupils of eight years training that may be selected.

We have a laudable and just pride in the advanced position of our school, and the work it is accomplishing, and we therefore bespeak for it a liberal and generous policy at your hands.

* * * * * * * * * *

CHAS. G. JOHNSON,
JAMES M. NEASMITH,
JAS. C. WILLSON,
Board of Trustees.

A.

REPORT OF THE PRINCIPAL.

[The following is from the report of the Principal to the Board of Trustees:]

In submitting for your consideration this report, I have to record a period of growth and general prosperity in the literary department, characterized alike by energy and faithfulness on the part of the teachers and officers, and by zeal and commendable behavior on the part of the pupils.

* * * * * * * * * *

One condition, which has operated disadvantageously to the smooth running of the schools, has been the necessity of replacing experienced teachers by new and untried ones. This is a serious evil, but one very difficult to remedy. In the work of deaf mute instruction, perhaps to a greater extent than in any similar profession, long experience is required for the attainment of the best results. The policy, then, of retaining efficient servants, even at increased salaries, commends itself as a wise one.

This report pertains to the schools and school-room work proper, and will be simply a cursory review of the important events of the past year. During this period the writer served in the capacity of teacher, and consequently is not familiar with many things which ought to be mentioned. The facts and figures are compiled from such records as were found in the books of the Institution.

The corps of teachers was the same in number this year as last, thirteen. Six of these were male and seven female. Three were themselves deaf-mutes, and two, semi-mutes.

The total enrollment of pupils was two hundred and forty-nine. The grad-

uating classes for the year numbered four, a list of whom, together with a full catalogue of pupils in attendance, giving names and residences, will be found appended to this report. It will be observed that the class of 1882 was much smaller than for many preceding years. The explanation for this decrease is that the time allowed to complete the course of study was wisely lengthened, by your action, from eight to ten years, and many gladly availed themselves of the two additional years in school. The present arrangement gives to each pupil, on an average, about seven years in which to acquire an education, the latter part of the course being equally divided between the different industries and the schools. Any reflecting person will readily admit that this time is none too long for children, handicapped from the beginning by loss of hearing and speech, to gain even the rudiments of an education.

* * * * * * * * * *

An attempt was made by the former Principal, Dr. MacIntyre, to reōrganize the school and systemize the work. With this end in view, with the coōperation of the teachers, three departments were established, named respectively,—primary, grammar, and academic. These departments were subdivided into grades. The primary comprised five grades; the grammar, three; and the academic, two; each grade representing a year's work. The following course of study was also adopted at the same time after careful reflection:

PRIMARY DEPARTMENT.

First Grade.—Standing, New Pupils.

Studies.

1. Lessons in Language. These include the use of natural signs, writing, dactylology, pictures, and such other objects and symbols as will serve to convey to the mind through the eye, the more obvious conceptions of persons and things as a medium of thought, and as a means of communication one with another.
2. Writing and Drawing. These exercises include the use of the crayon, pencil, and pen.
3. Numbers. The design in these exercises is to develop in the minds of the pupils of the class the ideas of units from one to ten, as applicable to objects, and their expression in signs, written words, and figures.

Text-books.—Keep's First Lessons for the Deaf and Dumb; Spencerian copy-book No. 2.

Second Grade.—Standing, from One to Two Years.

Studies.

1. Lessons in Language. The names of persons, things, and actions, their more obvious distinction as to number, person, gender, case, tense, and mode, and their formation into sentences, in statement, description, narration. interrogation, and definition.
2. Numbers. Counting, adding, and subtracting in simple numbers, with particular reference to the written language used as well as the figures, both in conceiving and in expressing through the eye the sense of these operations.
3. Writing and Drawing.
4. Moral Lessons. God, creation, man, the soul, right and wrong, rewards and punishments.

Text-books.—Latham's Primary Reader; Kirk and Belfield's Model Arithmetic for Little Folks; Peet's Scripture Lessons part I; Spencerian copybook, No. 3.

THIRD GRADE.—STANDING, FROM TWO TO THREE YEARS.

Studies.

1. Lessons in Language. Reading and the use of writing and the manual alphabet in recitations, the cultivation of the memory of words and ideas, and the habit of arranging them in sentences in the order of the English language instead of the inverted order of signs.
2. Arithmetic. Exercises in the development of simple numbers by the processes of addition and subtraction and in the conception and expression of these operations in written words and figures.
3. Scripture Lessons. Adam and Eve, the fall, the promise of mercy, and the history of the patriarchs.
4. Penmanship and Drawing.

Text-books.—Keep's School Stories; Little Folks' Model Arithmetic (Grube's Method); Peet's Scripture Lessons part II; Spencerian copy-book, No. 4.

FOURTH GRADE.—STANDING, FROM TWO TO FOUR YEARS.

Studies.

1. Lessons in Language. Reading, practical grammar, and composition on familiar subjects.
2. Arithmetic. The terms and symbols and the rules and methods used in solving simple problems in multiplication and division.
3. Scripture Lessons. The ten commandments, the ancient prophets, and the coming of Christ.
4. Penmanship and Drawing.

Text-Books.—Webb's Model First Reader; Robinson's Rudiments of Written Arithmetic, from page 7 to page 38; Peet's Scripture Lessons; Spencerian copy-book, No. 5.

FIFTH GRADE.—STANDING FROM THREE TO FIVE YEARS.

Studies.

1. Lessons in Language. The rudiments of grammar, including the common classifications of words; the inflections of verbs, as to time, number, person, mood, and voice; and of nouns as to number, gender, person, and case; and the form and force of the parts of speech in their relations to each other, and their positions in connected composition.
2. Arithmetic. Simple multiplication and division, including the meaning of the terms used in the statement, operation, and solution of propositions, and the rules by which the deductions are made.
3. Geography. The meaning of geographical terms; the use of globes and maps; and the study of the general outlines of the principal divisions of the earth's surface.
4. Penmanship and Drawing.
5. Scripture Lessons (weekly).

Text-Books.—Webb's Model Second Reader; Robinson's Rudiments of Written Arithmetic; Monteith's First Lessons in Geography; and Spencerian copy-book, No. 6; Peep of Day.

GRAMMAR DEPARTMENT.

FIRST GRADE.—STANDING FROM FOUR TO SIX YEARS.

Studies.

1. Reading. An exercise for the purpose of forming the habit of apprehending directly the sense of the words and sentences used, according to the genius of our language, and not through the medium nor in the order of natural signs.
2. Grammar and Composition. This study embraces the principles and practice of expressing thought readily and accurately in written language.
3. Arithmetic. Thorough practice in the four fundamental rules.
4. Geography. A general view of the divisions of the earth, and a more particular description of North America and the United States.
5. Scripture Lessons (weekly).

Text-books.—Webb's Model Third Reader; Kerl's First Lessons in Grammar; Robinson's Rudiments of Arithmetic, from page 7 to 73 inclusive; Monteith's Introduction to Geography; International Sunday-School Lessons (weekly).

SECOND GRADE.—STANDING FROM FIVE TO SEVEN YEARS.

Studies.

1. Language. The analysis of the different parts of speech, the rules of syntax, the principles of parsing, and written exercises in composition on familiar subjects as practical illustrations of the fundamental principles of the language.
2. Arithmetic. Common, decimal, and compound fractions, and reduction of compound numbers, denominate and accounting.
3. Geography. A particular review of the geography of the United States with the drawing of outline maps, and the study of the prominent features of the other principal countries of the earth.
4. History. History of the American people from the discovery of America to the end of Washington's administration.
5. Scripture Lessons weekly.

Text-books.—Kerl's Common School Grammar, parts II and III; Robinson's Rudiments of Written Arithmetic, from page 82 to page 71 inclusive; Monteith's Manual of Geography; Taylor's Brief History of the American People; and International Sunday-School Lessons.

THIRD GRADE.—STANDING FROM SIX TO NINE YEARS.

Studies.

1. English Grammar. The analysis and synthesis of sentences, and the proper and improper use of words in composition.
2. History of the American People. From the end of Washington's administration to the present time.
3. Arithmetic. Percentage, ratio, and proportion,—simple and compound.
4. Physical Geography. A detailed description of the physical features of the United States.
5. Scripture Lessons weekly.

Text-books.—Kerl's Common School Grammar; Taylor's Brief History of the American People; Robinson's Progressive Practical Arithmetic; International Sunday-School Lessons.

ACADEMIC DEPARTMENT.

FIRST GRADE.—STANDING FROM SIX TO NINE YEARS.

Studies.

1. Grammar and Composition.
2. Arithmetic.
3. Book-keeping.
4. Natural Philosophy.
5. Scripture Lessons.

Text-books.—Kerl's English Grammar, and Kerl's Lessons in Composition; Robinson's Higher Arithmetic; Mayhew's Book-keeping; Norton's Physics; International Sunday-School Lessons weekly.

SECOND GRADE.—STANDING FROM SEVEN TO TEN YEARS.

Studies.

1. Composition and Rhetoric.
2. Arithmetic.
3. Anatomy, Physiology, Hygiene.
4. English Literature.
5. Scripture Lessons weekly.

Text-books.—Kerl's Composition and Rhetoric; Robinson's Higher Arithmetic; Cutter's First Book in Anatomy, Physiology, and Hygiene; Stanford's Book of Literature; International Sunday-School Lessons.

This system has been in operation two years, and while many defects are apparent, it may be said to have proved fairly successful on the whole. It has, however, been found best, after a thorough trial, to materially change the studies and text-books, dropping out some and substituting others more adapted to the wants of the deaf and dumb.

The method of regular hourly recitations, modeled after the common schools, and in vogue in several institutions in this country, was introduced during the school year of 1881–82, but abandoned at the end of that time as hardly feasible.

* * * * * * * * * *

While our library has been greatly improved by recent additions, it still lacks in many important respects. Books and papers for the younger class of pupils, books of reference, etc., are especially needed. An amount of $200 could be expended annually to good advantage. In this connection I should like to call your attention to the sad lack of illustrative apparatus,—a matter which should receive immediate consideration if our school is to keep pace in the future with other similar schools. Until the present session there was absolutely nothing of this kind, except a set of Cornell's outline maps. Pictures, objects, historical and physiological charts, globes, and every available appliance which facilitates the work of the teacher and pupil should be supplied. Under the most favorable circumstances, a deaf-mute child has difficulties enough in mastering the mysteries of the English language and the fundamental principles of knowledge. It is a rare exception to meet a congenital mute able to convey thoughts in a clear, forcible language. Mutisms, expressions which seem painfully stiff and stilted to persons of unimpaired faculties, abound in all their composition. This defect is most evident when the use of our ordinary colloquial phrases is required. Various causes have been assigned by thinkers on this subject for the existence of this peculiarity, and various methods of instruction have been advocated to overcome it. The method used in this institution has been a combination of the manual alphabet, writing, and signs, giving especial prominence to no particular theory. The same general plan will be pursued in the future, and with the cheerful assistance of all concerned in the work, it may reasonably be expected that our school will continue to hold the high place it has attained.

Respectfully,

F. A. PLATT,
Principal.

MICHIGAN SCHOOL FOR THE BLIND.

REPORT.

Hon. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

DEAR SIR,—I herewith submit the following report of the Michigan School for the Blind, for the year 1882, as provided by law:

The officers for the year were as follows:

Superintendent—J. F. McElroy.

Matron—L. Valeria Abbott.

First Literary Teacher—E. Gertrude Thayer.

Second Literary Teacher—Eliza L. Johnston.

Instrumental Music Teacher—Jennie Van Wormer.

Vocal Teacher—Ella E. Mixer.

Teacher of Girls' Work—Gracie E. Judd.

Teacher of Broom-making—Clark Scammon.

The work of the school is carried on in three departments: the literary, the music, and the handicraft. The following exhibit shows the number of pupils in the several departments and classes, and the studies pursued by each:

There were enrolled in the literary department 63 pupils, who were divided into grades as follows, viz.: 1st grade, 12; second grade, 26; third grade, 35.

The studies pursued by the several grades during the year were as follows, viz.:

First Grade—General exercise, object lessons, natural philosophy, physiology, and memorizing. Second Grade—Object lessons, reading, spelling, arithmetic, and memorizing. Third Grade—Object lessons, arithmetic, reading, spelling, geography, and memorizing.

The whole number in the music department was 39, of which number 26 received instruction in vocal and 37 in instrumental music.

In the handicraft department 32 pupils received instruction in broom-making and 30 in sewing, knitting, etc.

The past year has witnessed good progress in all the departments of our school. The number of pupils in attendance has been larger than ever before, and has been limited only by the smallness of our accommodations. An effort will be made to secure such appropriations by the Legislature of 1883 for building and special purposes as will provide suitable accommodations for the present and future requirements of the school.

Our aim is to furnish the pupils with a good common school education, and to give them instruction in such occupations as they are best able to pursue. A specialty is made of musical instruction, by way of preparing our pupils for positions as music teachers. This field offers those musically inclined a competent means of self-support. It is needless to say that a large part of our pupils receive instruction in music, as the aptitude of blind persons, making them fit subjects for musical instruction, is well known.

A much needed addition has been made to our library during the past year; also, a good beginning has been made in our collection of apparatus and natural history specimens. We trust that farther additions will be made from time to time, as the means for so doing may be provided.

Very respectfully,

J. F. McELROY,
Superintendent.

MICHIGAN STATE REFORM SCHOOL.*

REPORT OF THE BOARD OF CONTROL.

* * * * * * * * * *

The report of the Superintendent gives so full a statement of the internal management of the school, that it is unnecessary for us to refer to this except to endorse the suggestions therein contained, and to express the belief that in every particular which goes to make successful work in an institution of this character, our school is second to none. We are proud to be connected with an institution which is doing so good a work for those committed to its care, and are happy to believe that the people of the State realize and appreciate the value of this school in training for useful citizens boys who, through unfortunate surroundings, would otherwise be likely to become unprofitable or even dangerous members of society.

The appropriation for current expenses made by the Legislature of 1881 was $35,500.00 for each of the years 1881 and 1882—the same amount as had been appropriated for 1879 and 1880. This was the full amount asked, and was based upon the experience of the preceding years, which indicated that we should be called on to provide for an average of 300 boys at an annual cost to the State of about $118.00 each. The material increase in the price of almost every article of food and clothing, and the unexpected and large increase in the number of inmates during the past year, have made it necessary for us to constantly ask ourselves, What can we do without? rather than, What do we need? Fortunately we had a balance of $6,815.55 on hand Oct. 1, 1880, by the help of which, with the most rigid economy in every department of our work, even to postponing till another year some repairs and improvements which were really needed earlier, we hope to report no deficiency January 1, 1883. The estimated needs of the institution for current expenses, during the years 1883 and 1884, are as follows:

For general salaries	$11,400 00
For provisions	15,000 00
For clothing and shoes	4,500 00
For ordinary repairs	3,000 00
For teachers' salaries	3,500 00

* NOTE.—The annual report, required by Section 2, Act 206, Laws of 1881, to be made to the Superintendent of Public Instruction, not having been received, the following has been taken from the biennial report of the Board of Control to the Legislature.—SUPT. PUB. INSTRUCTION.

For miscellaneous expenses	$3,000 00
For fuel	3,000 00
For lights	1,500 00
For expenses of farm and barn	1,500 00
For painting	600 00
For furniture	500 00
For bedding	600 00
For discharged inmates	600 00
For books and stationery for school rooms	400 00
For hospital expenses	300 00
For current literature and books for library	300 00
For farming implements	150 00
For repairs of wagon, harness, etc.	150 00
	$50,000 00
Less estimated receipts for earnings of institution	5,000 00
Total	$45,000 00

These estimates are based on the probable number of inmates and the present cost of living. The average number of inmates for the past two years has been 330, and the cost to the State has been, in round numbers, $115.00 per year for each boy. The estimated average of inmates for the two years to come is 415; the maintenance of which, at $115.00 each, would cost $47,725.00 for each year. We believe, however, that by practicing the same economy which we have persistently and successfully studied in the past we may be able to still further reduce the cost to $110.00 per capita, or $45,000.00 for the entire school. Less than this amount would, we are sure, prove inadequate to meet the proper and reasonable demands of the school.

The Board of Corrections and Charities, after a very careful examination of the needs of the institution, expresses the opinion that, "under the conditions and circumstances stated, the sums estimated are considered reasonable and proper."

The needs of the institution not properly classed as current expenses are as follows:

For completion of the main building	$17,500 00
For a double cottage	17,000 00
For a farm team	400 00
For tax on county drain	1,000 00
To elevate tower and build water-tank	1,500 00
To furnish main building and cottage	2,100 00
For wind-mill and fixtures	500 00
Total	$40,000 00

The special session of the Legislature of 1882 appropriated $75,000.00 for re-building a portion of the main building, for erecting two cottages, for furnishing these buildings, and for re-modeling and extending the steam-heating apparatus of the school. The work which has been done under the provisions of this act is stated at length in the report of the Superintendent.

In order to complete the rebuilding of that portion of the main building condemned as dangerous, in a manner commensurate with our needs and the best interests of the State, it is estimated that $17,500 will be required.

Upon the completion of the double cottage now being erected, our school-room and dormitory capacity will be 385, which number will probably be reached before January 1, 1883. This renders imperative the immediate building of additional accommodations of the character mentioned, which can be most economically provided by erecting another double cottage, similar to the one soon to be occupied, and which will cost not less than $17,000.00. For furnishing the new main building and the new double cottage $2,100.00 will be needed. This includes gas fixtures for both buildings, office cases and desks, school furniture for two school-rooms, 100 bedsteads for boys' dormitories, and the ordinary furnishing of rooms for officers and employés.

The successful prosecution of our farm work requires an additional team, which will cost at least $400.00.

We have in close proximity to our buildings five swamps, varying in size from one to five acres, which in addition to being unsightly and unproductive, are positive and alarming sources of disease to our inmates. A recent careful survey by competent engineers demonstrates that these with other waste land contiguous to our farm can be successfully drained at a nominal cost to us of probably $1,000. We ask therefor this amount, believing it necessary, not only as a sanitary measure, but that it would prove a good investment by converting what is now waste land into the most valuable soil for farming uses.

Our present means of protection in case of fire are altogether inadequate when we consider the extent of our buildings, and the great inconvenience which would accrue, should we lose any of them, before we could rebuild. Should a fire occur in any of our buildings when our engine was not running, we have no means of extinguishing it except a few small hand extinguishers. The most economical and feasible remedy for this seems to be to raise our water tower sufficiently so that water from this may be thrown over any part of our highest buildings. We have estimated the cost of this at $1,500.00.

A large portion of our expense for fuel in the summer months is for pumping water into the tank in the water tower. Much of this might be saved, we think, by the use of a wind-mill for pumping. This would cost about $500.00.

Each of these special needs has been carefully investigated, and our recommendations are based upon what we believe are the best interests of the State.

* * * * * * * * * *

We have the honor to remain your obedient servants.

DAVID B. HALE,
E. H. DAVIS,
GEORGE A. SMITH,
Board of Control.

Lansing, September 30, 1882.

A.

SUPERINTENDENT'S REPORT.

To the Honorable Board of Control of the Reform School:

GENTLEMEN,—I have the honor to submit the report of the institution under our care for the past two years, during the greater part of which time I have been your Superintendent. In doing so I shall confine myself simply to a recital of such facts concerning its work as I deem of interest to the public, not considering it the province of one who has so recently undertaken a work of this character to indulge in theorizing in reference to the many intricate problems which are involved in its prosecution.

The whole number committed to the school since its opening is 2,704, of which number 392 have been received since September 30, 1880. The increase in the number of commitments during the past year over the previous year is 76. Should this rapid increase continue, it will soon necessitate the material enlargement of our accommodations or the establishment of another reform school. With less desire on the part of many justices of the peace and constables to obtain the fees incident to the prosecution and commitment of juvenile offenders, and more earnest efforts on the part of many county agents of the State Board of Corrections and Charities, in the way of finding homes for those whose only crime is that they are homeless, commitments to this institution would be fewer by far than at present. Appreciating fully the good work we are doing, I can but believe that there is no place for a good boy like a good home, and that much of the expense incurred in getting boys into the Reform School, and in maintaining them while here, might be saved by an honest effort in the way of finding good homes for them in the localities from which they are sent. That this is feasible has been demonstrated by several county agents. Did these public servants receive a reasonable compensation for their labors, I am sure much more valuable work of the character indicated would be accomplished. Of the 392 boys received during the past two years, 232 were born in Michigan, 29 in Canada, 25 in New York, 12 each in Ohio and Illinois, 10 in Germany, 6 in England, and 4 in Ireland. Of the fathers of these boys 139 were born in America, 48 in Canada, 37 in Germany, 33 in Ireland, and 19 in England. Over two-thirds the entire number (274) were convicted of larceny, while 66 were vagrant and disorderly, and 25 were guilty of assault and battery. Of the 346 who have left the institution since September 30, 1880, 249 were discharged, 94 were granted leave of absence, 2 escaped, and 1 died. We have inaugurated the practice of granting a leave of absence to many boys who by their good conduct have merited our confidence to such an extent that we think it wise to test their ability to do well without the restraining influences of the institution, still retaining our hold upon them, that we may, if necessary, recall them. In this way we have been able safely to release many concerning whose thorough reform there seemed to be a question. The success of this plan has been most satisfactory, only nine of the boys so released having been returned, and these in some instances through no fault of theirs, but from a lack of good home surroundings.

It has been our aim to retain no boy in the institution longer than was for

his good, believing it far better to have a few returned than to keep the many longer than is necessary. The average time in the institution, of the boys who have been released during the past year, was about nineteen months, which is less by nearly eight months than the average for several years previous. We have thus made a large saving in the cost of maintaining the institution, without injury to prospects of those released.

The health of our inmates has been remarkably good, there having been but one death for over three years, and but few cases of serious illness. This we feel warranted in attributing to the extreme cleanliness which we aim to maintain throughout our institution, plain but wholesome food, a plenty of exercise and sleep, and regular habits of eating, retiring, and rising.

The past two years have seen several valuable improvements in our farm, chief among which have been the clearing of stumps off over thirty acres, the building of at least half a mile of substantial fence, and the addition to our fields of over three thousand loads of dressing drawn from the city. No work that we give the boys is so much enjoyed by them as that on the farm, and we believe that in no way can we more surely equip the average boy for health and material prosperity, than by inspiring him to become a good farmer. Many boys who came to us from our large towns, and who, should they return to their former homes, could hope for nothing above the work and wages of the lowest grade of day laborers, have been provided with homes with responsible farmers, where they bid fair to grow into useful and respected citizens. Our farm is not, however, carried on simply as a training school, for a lot of prospective agriculturists, nor yet as an ornamental appendage to the primary work of the institution, but especially as the most economical way of providing vegetables, garden sauce, hay, and grain for the use of the institution.

All the boys of the institution are in school an average of four and a half hours five days of each week, and work the same length of time each day. On Saturday afternoons the boys play on the yard. The entire work of the institution, including the farming, house cleaning, dining-room work, preparation of food, making and repairing of clothes, bedding, and shoes, together with the work in the engine-room and laundry, is done by the boys, under the direction of competent overseers. The smaller boys are, for the most part, employed in chair-caning. I hope that we may soon be able to introduce some mechanical industry, which will be of more practical value to the boys in after life than chair-caning, which is valuable only as a means of keeping the boys from idleness in addition to bringing in a revenue of about $5,000.00 a year.

Most of the boys in coming to us are very backward in their studies, many even being entirely unable to read or write. It is our intention to give to each boy a fair knowledge of the common English branches before he leaves us, except when he is to go to a home where he will have an opportunity to attend school. I have never seen in any school so rapid progress made by any pupils as with us. This is not on account of any superior advantages which we possess in the way of imparting instruction, but is attributable entirely to the fact that we have a regularity of attendance upon school work which cannot be attained in the public school.

THE BUILDING AND OTHER IMPROVEMENTS OF THE PAST TWO YEARS.

The "Lecture Hall" (chapel) is a neat brick structure, 50 x 80 feet. It was planned with special reference to the needs of the school, and furnishes ample and convenient accommodations for Sunday devotional exercises, and all

L
162
B2

liments of

HERSCHEL R. GASS,

Superintendent of Public Instruction,

Lansing, Mich.

other occasions where it is necessary or desirable to use a large audience-room. The basement story of the building is used as a picture gallery, reading-room, and library. The large collection of pictures—most of which have been presented to the school—can here be displayed for the pleasure and culture of the boys, and the newspapers and library books are, for the first time in the history of the school, placed where they can be freely and conveniently used.

The main building has been covered with a superior tin roof.

The "Winter Hall" (play shed) is a brick shell, 30 x 150 feet, well lighted and provided with gas fixtures and a stove to be used in the coldest weather. This building was intended to give opportunity for active recreation in very stormy and cold weather, and fully meets the expectations of the Board.

The amount appropriated for a barn has been expended in erecting a commodious brick horse-barn and carriage-house adequate to the present and prospective wants of the institution.

The entire amount appropriated for filling the swamp in the rear of the buildings was expended as provided, but proved inadequate to complete the work.

Under the appropriation of 1882 the board has adopted plans for enlarging and remodeling the steam-heating facilities of the school, which include a new boiler-house, with brick smoke-stack, and two new boilers, plans for a double cottage which will furnish school-room and dormitory accommodations for 100 boys, and plans for a residence for the family of the Superintendent of the school. Upon these last mentioned improvements there has been expended up to the present time—September 30, 1882—$18,628.36, and it is estimated that their entire cost, including furnishing of buildings, will aggregate $35,500.

The Board of Control have endeavored to build in the most substantial manner, believing that the State cannot afford to squander money or jeopardize life in poorly-constructed buildings.

As soon as the cottages now being erected are completed it is the intention of the Board to begin removing that portion of the main building already condemned, so that work on the new main building may be commenced early in the spring of 1883.

After visiting several of the best reformatory institutions of the country, I am happy to believe that in no other institution is more successful work being done for its inmates than in ours. In my efforts for the well-being of our boys I have been ably supported by as enthusiastic and capable a corps of officers and employés as can be found in any institution. Especially would I commend the valuable services of the Assistant Superintendent, Mr. T. R. Waters, who, in addition to his extended and varied experience in this work, gives us the benefit of rare good sense and a remarkable devotion to the interests of the institution.

With a keen appreciation of your hearty support and wise counsels, I have the honor to subscribe myself,

Your obedient servant,

C. A. GOWER, *Superintendent.*

MICHIGAN REFORM SCHOOL FOR GIRLS.

REPORT.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

DEAR SIR,—I have the pleasure of submitting to you the following statements of the educational department of the Michigan Reform School for Girls:

Number of girls in school, September 30, 1881	18
Received from September 30, 1881, to September 30, 1882	67
Total number received since school was opened	85
Number returned to counties	2
Belonging at close of year, Sept. 30, 1882	83

The following tables show the present grade of pupils in cottages, their condition, when received, their present classification, the course of study which we have adapted to their needs, the text-books used, and the names of officers, all of whom are instructors in their respective departments:

COTTAGES AND GRADES.

In No. 1 cottage,—lowest grade	19
In Clark cottage,—second grade	25
In No. 3 cottage,—highest grade	39

CLASSIFICATION OF PUPILS AS RECEIVED.

Reading.

No. unable to read	13
No. able to read in Appleton's First Reader	16
No. able to read in Appleton's Second Reader	13
No. able to read in Appleton's Third Reader	22
No. able to read in Appleton's Fourth Reader	19
No. able to read in Appleton's Fifth Reader	2
	85

Penmanship.

No. unable to write	43
No. able to write, but very poorly	35
No. able to write a fair hand	7
	85

Arithmetic.

No. not able to read or to add numbers	35
No. that had begun primary arithmetic	42
No. able to begin Olney's Elements of Arithmetic	6
No. that had advanced as far as fractions	2
	85

Geography.

No. that had no knowledge of geography	43
No. able to begin introductory geography	32
No. able to begin comman school geography	8
No. that were advanced in common school geography	2
	85

Other Branches.

No. that had studied history and language to some extent	2

PRESENT CLASSIFICATION.

Reading.

No. able to read in Appleton's Fifth Reader	24
No. able to read in Appleton's Fourth Reader	24
No. able to read in Appleton's Third Reader	14
No. able to read in Appleton's Second Reader	17
No. able to read in Appleton's First Reader	6
No. not able to read	0
	85

Penmanship.

No. able to write a fair letter	25
No. able to write a fair copy	25
No. able to write, but poorly	23
No. that have commenced learning to write	12
	85

Arithmetic.

No. studying Olney's Elements of Arithmetic:	
A Division—Percentage	2
B Division—Fractions	10
C Division—Long Division	6
D Division—beginners	17
No. studying Olney's Primary Arithmetic:	
A Division—advanced to page 98	6
B Division—advanced to page 69	5
C Division—advanced to page 52	12
D Division—in simple addition	27
	85

Geography.

No. studying Harper's Common School Geography:	
A Division—reviewing	2
B Division—advanced to page 75	8
No. studying Harper's Introductory Geography:	
A Division—reviewing	6
B Division—advanced to page 75	18
C Division—advanced to page 33	21
D Division—beginners	10
Not yet commenced geography	20
	85

Other Branches.

No. that have begun Scott's Small History U. S.	12
No. that have begun Swinton's Language Lessons	12
No. that have begun Kitchen Garden Text-book of Household Economy.	22

The entire school has exercises in spelling each day, and is classified in spelling as in reading.

COURSE OF STUDY.

The course of study is as follows:

E Class—Appleton's First Reader, slate exercises in drawing, spelling, writing, and numbers.

D Class—Appleton's Second and Third Readers, penmanship, drawing, and spelling, Olney's Primary Arithmetic, Harper's Introductory Geography.

C Class—Appleton's Fourth Reader or Hooker's Book of Nature, penmanship, spelling, and letter writing, Olney's Elements Arithmetic, Harper's Common School Geography, Swinton's Language Lessons.

B Class—Appleton's Fifth Reader or Scott's School History of the United States, penmanship, spelling, and letter writing, Harper's Common School Geography, Olney's Elements of Arithmetic, grammar or language lessons.

A Class—Readings from history, kitchen garden text-book of household economy, physiology, grammar, book-keeping.

OFFICERS.

Miss Emma A. Hall, Superintendent.
Miss E. H. Churchill, M. D., Physician and Assistant Superintendent.
Miss Laura Andrews, Superintendent's Housekeeper.
Miss S. V. Wood, Manager, Clark Cottage.
Miss Hortense B. Seaver, Teacher, Clark Cottage.
Mrs. F. S. Rush, Housekeeper, Clark Cottage.
Miss Mary Farrand, Manager, No. 3 Cottage.
Miss Fannie L. Hall, Teacher, No. 3 Cottage, highest grade.
Miss Sarah Massie, Housekeeper, No. 3 Cottage.
Miss Grace E. Bradley, Supply Officer.
Miss Clara Nichols, Sewing Teacher.

ADDITIONAL.

We have a well chosen library of 179 volumes, from which the pupils draw books each week. We receive copies of *St. Nicholas, Wide Awake, Youth's Companion*, and *Harper's Young People* regularly. We give special attention to industries—domestic and sewing—chiefly in forenoon. The literary department occupies from 2 to 4: 45 P. M., with an hour study in the evening.

Respectfully submitted,

EMMA A. HALL,
Superintendent.

STATE PUBLIC SCHOOL FOR DEPENDENT CHILDREN.*

REPORT OF THE BOARD OF CONTROL.

[The following is from the report of the Board of Control, and covers the year ending September 30, 1882]:

* * * * * * * * * *

An intimate knowledge of the laws of Michigan regarding children, not only by those especially connected with the work and responsibilty of caring for dependent children, but by our people generally, together with their enforcement, would tend to secure better results in this school, and would also operate in a marked degree to decrease and prevent dependence and delinquency among children. Especial attention in this connection is called to the law for the

PROTECTION OF CHILDREN.

This was enacted in 1881 on recommendation of this Board. By its provisions no child admissible to this school can be sent to or retained in a county poor-house, in association with adult paupers. No child can be placed with adult prisoners in jails. They are not permitted in drinking saloons, gambling houses, variety theatres, or dance houses. The sale or gift to them of obscene papers is prohibited. They are not permitted to exhibit in public shows dangerous to life and limb. The violation of these and other provisions is made a misdemeanor.

If public sentiment has not yet reached the point where the sale of liquors as a beverage to adults shall be made a crime, it may be it has so far as children are concerned, and if so they may be saved from a life of dependence or crime from which the laws do not protect the parents.

THE STATE HOSPITAL AND DEPENDENT CHILDREN.

Another law enacted in 1881, on recommendation of this Board, is further evidence of the intelligent humanity and correct political economy of the people of this State. This law provides that the children of this school and those in the counties, who, if cured, would be admissible here, shall have free treatment, board, and nursing while at the University hospital for treatment,

* The annual report to the Superintendent of Public Instruction, required by section 2, Act No. 206, Laws of 1881, not having been received, the report here given has been compiled in this office from the last biennial report of the Board of Control to the Governor.—SUPT. PUB. INSTRUCTION.

and free transportation to and from that hospital. Thus children who without this skillful surgical or medical treatment might be always dependent on the public are relieved of their disabilities, made admissible to this school, and from here finding good homes, the State is forever relieved of their support. Several cases from this school have thus been successfully treated and many more from the counties.

* * * * * * * * * *

AMENDMENTS OF 1881.

The laws relating to this institution were revised and amended by the Legislature of 1881, in certain respects, where experience had suggested modifications. No radical change, however, has been made. The experiences of eight years have only served to confirm confidence in the principle on which this school is based, and the leading principle is that this institution shall be only a temporary home for the child, who shall be placed in a family home as soon as a suitable one is found, and the child is prepared for it. By the amendments of 1881 the Board is authorized, in its discretion, to indenture children only until they are 18 years of age. To what extent this shall be put in practice has not been determined. Whatever may be the length of indentures it will be necessary that the Board shall retain at least nominal guardianship during minority, so that parents who have abandoned their children cannot claim their earnings. Most of the amendments of 1881 were to secure clearness and better arrangement of the law, to define better the division of admission of children among the several counties, to provide for the expenses of returning to their counties children who were not admissible, to specify more definitely what the indenture contract should contain, to provide for biennial reports to the Legislature, etc. No amendment will probably be asked for from the Legislature, unless it be to Sec. No. 19, so that the expenses of the State Agent, when visiting indentured children or securing homes for others, may be audited by the Board of State Auditors and paid from the general fund as herein hereafter stated.

* * * * * * * * * *

PLACING CHILDREN IN FAMILIES.

When one visits this school for the first time, and sees, in the chapel and dining-room, some three hundred little children, between three and twelve years of age, he is impressed with the responsibility and care required to provide for, educate, and find homes for so many. He is correct in his estimate that constant attention, patience, zeal for the cause, and much labor is required for these otherwise homeless children. But did the visitor know that the care of those in the institution was but a small part of the work being done by the management, he would then begin to appreciate what is done here by the State. On investigation he would learn that the great majority of our children are out in families where we have placed them, and where the State supervises them, securing their education and treatment as members of the families where placed during minority. The care of those out in families is a very extended work and increases each year. There is to-day no public institution in Michigan requiring more labor and care to conduct than the State Public School for dependent children. In any other, any inmate can be seen in a few moments' time. Here the majority are scattered all over the State, in families,

and must be reached by correspondence with guardians, county agents of the Board of Corrections and Charities, and often in other ways. This school adds each year to the number of those in families about 100. In the year ending this Sept. 30th, the net gain in families was 111. Some years the number is more. The labor of protecting the interests of this regiment of young children all through the State is constant and laborious. The more thoroughly it can be done the higher the results will be. The county agent first approves of the home the child is to be placed in, and then is to supervise it there to secure the execution of the indenture contract. This agency is a very valuable one to this school, and this Board has always fully endorsed it. But most of these agents are in business of their own, and are in many cases unable to attend to the work as fully as needed. The Board of Corrections and Charities is making a special effort to improve this agency, and there is no doubt that their efforts will prove successful. It is, however, the opinion of this Board, based on experience and our needs, that it would be wise to supplement the county agents' work, by making it possible for the State Agent of this School to personally visit these children, and assist to secure homes for others. In the annual reports this Board has before urged this course, and pointed out its benefits. It is believed that higher results can be reached, and ultimately at less cost than can possibly be done under present available methods. To enable the agent of this School to visit these children when necessary, this Board recommends that his salary and expenses be audited by the Board of State Auditors and paid from the general fund. This work can probably be done during six months of each year. In this way, if the hopes of this Board are not realized, the work could be discontinued at any time.

* * * * * * * * * *

One-Story Hospital.

The present hospital was so constructed that it might be readily converted into a cottage for children. The general construction is the same as the best and last made cottages. No changes of importance need be made, and in the main there will be only the furnishing. It is found that for a hospital the second story is of little value, and the first story is not large enough for the sick and convalescent. It is mainly used for cases requiring little treatment, as there has been little sickness, and as a quarantine where new children are received, cleaned up, and fitted to go into the cottages with the other children. A less expensive one-story building, on a smaller scale, designed somewhat after those on the University grounds in Ann Arbor, would be more suited to our purposes. This has been before recommended, but there was no suitable place for its location until the farm buildings were removed to the farm, leaving a very desirable location for the proposed hospital. Its location and erection there are strongly recommended.

Capacity of the Institution.

When this school was opened in 1874 there was room for only 150 children, which was not adequate for the wants of the State. The pressure for admissions was such that it was from year to year increased by Legislative appropriations so as to provide room for 300. Since the opening 1,231 have been received, leaving at no time many admissible children in the counties. It has

fairly kept pace with the demands upon it. But for a while past the pressure for admissions has been on the increase, and especially since the passage of the law of 1881, "For the protection of children," by the provisions of which no children admissible here can be placed in the county poor-houses. The school was organized in 1871. The year before the census showed the population of the State to be 1,184,059. In 1880 our population had grown to 1,636,331, showing an increase in ten years of 452,272, nearly half a million, nearly fifty per cent. It is a well known fact that the increase of pauperism is greater in ratio than that of population. Considering these facts and that the school during this increase has so fairly met the demands upon it, it is fair to assume that its work has operated to reduce the number of dependent children.

It is not, however, deemed safe to assume that the act of 1881, last named, will very largely increase the number of applicants. No large increase to the number here is recommended. As it seems at this time advisable to vacate the present hospital, in view of its adaptibility to a cottage, and its good location for one, an increase of thirty children to the number is recommended.

In the opinion of this Board, with the capacity for 330 children, the county agency system perfected, and that work supplemented by the agent of this school visiting the children for six months each year, this work will operate successfully for many years without further increase of capacity.

In Memoriam.

Since our last report this State has lost one of her most distinguished and best beloved sons, and this institution one of the first members of its board of control and devoted friends. No one ever loved his State and its people better than he, and it was a loss to the State, the people and this School when Ex-Governor John Judson Bagley died. In his eloquent words he had said: "To my mind the grandest work the State has ever done is the State Public School at Coldwater." And so believing, in public and private, as executive and citizen, he always gave it his love, labor, and material aid. The fountain on our grounds, the "Kittie Bagley Fund" he established, and the buildings he aided in planning are some of the visible monuments to his memory here. But in all the organizing work of the institution, in aiding in planning it as a school and not as an asylum, for the children of the poor, in all of which work he labored so untiringly and zealously as a member of the board and then as Governor, must we look for the truest memorials of him. His heart was always with these homeless children, very many of whom will long remember his kindly greetings and cheerful presence. His last words—"My Love for the Children," though for others, could have been as truly used to express his sentiment for those in our care.

For his love and work for these children of the poor, for his business counsel and intelligent assistance, for his kindness and friendship—we miss him, and speak these few words gratefully in his memory.

* * * * * * * * * *

In Conclusion.

The Board of Control, in conclusion, expresses its sincere gratification with the general management by the Superintendent and others who have immediate charge of the work, and with the results obtained. At no time during the

eight years' history of this institution has there been here a more devoted, efficient, and successful corps of workers. Under their charge, the training, education, and general care of these children has had the attention it would from own parents. While these children are not unfitted here for the homes they are to enter, by over indulgence, having here plain, wholesome food, and plain, comfortable clothing, yet they do have that attention, protection, and genuine affection that proves that those who have them in charge have a lively interest in their welfare. With such helpers, the best results may be expected.

During the eight years' existence of this school its methods, operations, and what it has accomplished have had substantially the unanimous approval of each succeeding Governor, Legislature, the people, and the county officials more immediately connected with this work. Their endorsement and good will have been a constant encouragement to the management. From State and county officials, from the people generally, and from those engaged in similar work in and out of the State, there have been only words of cheer, which we gratefully acknowledge, hoping that this friendly sentiment will be an incentive to still greater efforts for these children.

But what has been accomplished for these children cannot be told in a brief State report. Individual cases might be given that would be interesting, touching, and more thrilling than romance. Many have been taken "out of the depths" of broken homes, evil surroundings, and haunts of misery, where the cruelties of intemperance were crushing out all that was good and fresh in their young lives. Brought here they have learned, for the first time, what was virtue, temperance, cleanliness, religion, loving care, and a home. Here the buoyancy and freshness of childhood is regained. The ways of a purer life are taken on, the child is young again, cleaned and fitted for a good home, is placed there rescued from probable pauperism and possible crime, where, by the wise, economical charity of the State, in a happy home, loved and respected, it in time becomes a self-supporting and respectable citizen. The history book of this school is filled with the stories of many such children, where they can be read by those who desire a more intimate knowledge of this work. And the most extended examination of the operations and results of this work by the Governor, Legislature, and educational department of the State, is especially solicited.

With the highest respect, grateful for encouragement extended, soliciting your continued good will for this institution in our charge, and requesting your most friendly favors for these children of the poor, we have the honor to be,

Very respectfully yours,

JAMES BURNS,
ISAAC A. FANCHER,
C. D. RANDALL,
Board of Control.

A.

REPORT OF THE SUPERINTENDENT.

To the Honorable Board of Control of the State Public School:

GENTLEMEN,—I herewith present you the Eighth Annual Report of the State Public School covering the biennial period ending September 30, 1882:

CURRENT EXPENSE FOR THE YEAR ENDING SEPTEMBER 30, 1881.

DEBIT.		CREDIT.	
Inventory Oct. 1, 1880	$9,835 24	Inventory Oct. 1, 1881	$11,769 66
Bills payable Oct. 1, 1880	41 16	Paying last year's bills	124 95
Amount expended	37,906 20	Net current expense	35,887 99
	$47,782 60		$47,782 60

CURRENT EXPENSE FOR THE YEAR ENDING SEPT. 30, 1882.

DEBIT.		CREDIT.	
Inventory Oct. 1, 1881	$11,769 66	Inventory, Oct. 1, 1882	$11,433 9
Bills payable Oct. 1, 1882	1,441 96	Paying last year's bills	41 16
Amount expended	36,463 77	Net current expense	37,200 26
	$49,675 39		$49,675 39

* * * * * * * * * *

TABLE II.

Number Received, Indentured, etc., during the Past Two Years.

	1881-82	1880-81	Total.
Number received	150	137	287
" indentured	175	196	371
" returned to counties whence they came	19	37	56
" absconded	0	0	0
" died	2	0	2

TABLE III.

Number Received, Indentured, etc., since School opened.

Whole number received	1,231	
" " indentured	.....	748
" " returned to counties	.....	131
" " absconded	.....	5
" " died	.....	36
" " remaining in school Sept. 30, 1882	.....	311
	1,231	1,231

* * * * * * * * * *

TABLE VI.

Sex, Parentage, etc., of Children Received during past Two Years.

	1881-82.	1880-81.	Total.
Males	99	89	189
Females	51	48	98
Whites	145	132	277
Colored	3	4	7
Indians	2	1	3
Native parentage	57	57	114
Foreign	74	58	132
Unknown	19	22	41
Orphans	14	13	27
Half orphans	54	46	100
Whose parents are both living	82	78	160
Who came from the poor-house	68	70	138
Whose parents were convicted of crime	25	22	47
Whose parents were intemperate	70	43	113

TABLE VII.

Present Standing of the School.

Number reading in Chart	82
" reading in First Reader	78
" reading in Second Reader	85
" reading in Third Reader	41
" reading in Fourth Reader	15
" able to write letters	96
" able to add practical examples	136
" able to subtract practical examples	108
" able to multiply practical examples	64
" who know the Multiplication Table	64
" who are studying outlines of Geography	72
" who are studying Colton's Primary School Geography	32
" who are studying Colton's Grammar School Geography	9
" who are studying Hager's Elementary Arithmetic	35
" who are studying Hager's Primary Arithmetic	33
" who are studying Swinton's Language Lessons	9
" who are studying Hooker's Book of Nature	36

TABLE VIII.

Present Age of School.

Number between 2 and 3	0
" " 3 and 4	1
" " 4 and 5	9
" " 5 and 6	20
" " 6 and 7	27
" " 7 and 8	32
" " 8 and 9	55
" " 9 and 10	29
" " 10 and 11	38
" " 11 and 12	27
" " 12 and 13	46
" " 13 and 14	14
" " 14 and 15	10
" " 15 and 16	3
Total	311

Average age, 9 years.

TABLE IX.

Course of Study.

FIRST PRIMARY.

Calisthenics.	Learning to count.
Singing.	Spelling and reading from Chart.
Geography of the School-room.	Model First Reader commenced.
Making figures.	Drawing on slates.

SECOND PRIMARY.

Model First Reader (Word Method).	Map of Michigan, and Script Writing on Slates.
Spelling.	Drawing on Slates.
Oral Arithmetic.	
Addition and Subtraction Tables.	

THIRD PRIMARY.

Model Second Reader.	Drawing on Slates.
Independent Child's Speller.	Sheldon's Object Lessons.
Oral Arithmetic.	Oral Instruction in Geography.
Script Writing on Slates.	

FIRST INTERMEDIATE.

Model Third Reader, Spelling.	Sheldon's Object Lessons.
Hager's Primary Arithmetic.	Colton's Introductory Geography.
Drawing.	

SECOND INTERMEDIATE.

Harvey's Third Reader.	White's Progressive Art Studies.
Third Model Reader.	Intellectual Arithmetic.
Swinton's Language Primer.	Spelling, Writing.
Colton's Common School Geography.	Hager's Elementary Arithmetic.

THIRD INTERMEDIATE, OR GRAMMAR.

Swinton's Language Lessons.	Hager's Elementary Arithmetic.
Intellectual Arithmetic.	Anderson's Junior Class History of the United States.
Hooker's Child's Book of Nature.	White's Progressive Art Studies.
Colton's Common School Geography.	
Analytical Speller.	

* * * * * * * * * *

TABLE XI.

Productions of Labor in Various Departments.

PRODUCTIONS OF FARM AND COST OF SAME PRESENTED IN ACCORDANCE WITH SEC. 4, ACT 206, PUBLIC ACTS, 1881.

669 bushels potatoes @ 40c	$267 60	3,686 pounds pork @ 7c	$258 02
573 bushels apples @ 60c	343 80	656 pounds beef @ 8c	52 48
432 bushels turnips @ 25c	108 00	520 pounds lettuce @ 5c	26 00
88 bushels onions @ 65c	57 20	2,501 qts. Snyder blackberries @ 12c	300 12
20 bushels parsnips @ 80c	16 00	44 qts. raspberries @ 12c	5 28
85 bushels radishes @ 25c	21 25	192 qts. currants @ 4c	7 68
22 bushels beets @ 25c	5 50	26,321 qts. milk at 3½c	921 24
19½ bushels carrots	4 48	3,200 heads cabbage @ 5c	160 00
23 bushels string beans @ 45c	10 35	57 Hubbard squashes @ 5c	2 85
35 bushels cucumbers @ 40c	14 00	4 tons sweet corn stalks $4	16 00
8 bushels peas $1.00	8 00	47 tons hay @ $10	470 00
21 bushels tomatoes @ 50c	10 50		
33½ bushels peaches $2.00	67 00	Total value of productions	$3,401 70
1½ bushels grapes @ $1.25	1 87	Total am't charged to farm and barn	1,754 90
1 bushel pears	1 50		
317 doz. bunches asparagus @ 6c	19 02	Net value of productions	$1,646 80
50 doz. bunches celery @ 40c	20 00		
453 doz. ears sweet corn @ 12c	54 36		
290 doz. eggs @ 18c	52 20		

NOTE.—The amount charged to farm and barn includes what has been paid for agricultural tools, all straw used for children's beds, amounting to about $150.00, and for labor in keeping lawns mowed, making soap, and doing all the general choring for this institution, which has been more, on an average, than one man could perform.

SEWING ROOM.

Dresses	132	Christmas Suits	2
Aprons	477	Spreads	54
Shirts	414	Table Cloths	5
Drawers	160	Pillow Slips	482
Sheets	442	Bed Ticks	77
Napkins	54	Night Gowns	123
Towels	477	Suspenders	309
Handkerchiefs	1,343	Pillows	5
Waists	178	Chemises	26
Mattresses	1	Erasers	9
Repellents	58	Neck Ties	10
Clothes bags	1	Toilet Sets	2
Night-caps	1	Bed Ticks Repaired	171
Bibs	48		

SHOE SHOP.

Prs. Boots made	1	Prs. Shoes repaired	3,275
Prs. Shoes made	480		

KNITTING ROOM.

Prs. Socks knit	340	Prs. Mittens knit	113

BAKERY.

Loaves of Bread	60,000	Biscuit	84,000

TABLE XII.

Dietary.

BREAKFAST.

SUNDAY.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
Coffee. Oat Meal. Bread. Meat Gravy.	Milk. Hominy. Bread. Meat Gravy.	Milk. Rice. Bread. Meat Gravy.	Coffee. Hominy. Bread. Codfish.	Milk. Oat Meal. Bread. Hash. Molasses.	Milk. Oat Meal. Bread. Codfish.	Milk. Rice. Bread. Meat Gravy.

DINNER.

Bread. Baked Potatoes. Cold Meat. Cream Gravy. Pickles. Pie or Fruit.	Bread. Pickles. Potatoes. Vegetable Soup. Onions. Fruit.	Bread. Potatoes. Pot-Pie. Cabbage. Fruit.	Bread. Baked Potatoes. Meat Gravy. Pork and Beans. Fruit.	Bread. Potatoes. Fish. Meat Gravy. Turnips. Fruit.	Bread. Potatoes. Bean Soup. Onions. Cabbage. Fruit.	Bread. Potatoes. Pork and Beans Turnips. Pickles. Fruit.

SUPPER.

Bread. Milk. Gingerbread.	Bread. Milk.	Bread. Milk. Biscuit. Molasses.	Bread. Mush. Milk.	Bread. Milk.	Bread. Milk. Biscuit. Molasses.	Bread. Mush. Milk.

The above is the regular dietary; but in addition to this, during the season when vegetables and green fruits were abundant, the children's tables were furnished with string beans, peas, squash, berries, etc., etc.

* * * * * * * * * *

Although no marked changes have been made in the general management of this institution since our last report was issued, there is every reason to believe that good progress has been made, and that it is nearer the ideal of what such an institution should be, than ever before.

HEALTH.

In respect to health, the institution has more than maintained the high sanitary reputation of former years. Particularly has this been true of the past year, in which no death has occurred, nor has there been one during a period of fifteen months previous to this time, out of over 500 different individuals that have been connected with the school. The whole number of deaths during the past five years is only six. Few places have ever shown such a high health record among children of the age of ours. Such a record is the highest endorsement of our dietary, and the sanitary arrangements of this institution. No serious cases of sickness have occurred since last spring. Last winter there were three cases of scarlet fever, but the disease was soon stamped out by isolating the children and disinfecting the rooms and clothing. One year ago last spring there was an extensive epidemic of measles, which resulted in the death of one child.

* * * * * * * * * *

DIETARY.

Our published bill of fare, which may be found in the preceding tables, shows that the children's food, though plain, is wholesome, abundant, and provided in sufficient variety. At the same time it is well cooked, and only the best quality of raw material is used. The plump, healthy looking faces of the children, their rapid growth, and the absence of sickness, is the best assurance that our dietary is constructed on hygienic principles. Fruit in some form is furnished once each day. Pure, rich milk is used in large quantities twice each day. The best and lightest of white and brown bread is always on their tables, usually three kinds of vegetables are given them for dinner, and oat-meal, rice, hominy, mush, and the best quality of New Orleans molasses are regularly used on different days each week. Large quantities of fresh beef and fish are consumed, and palatable gravies are made of milk, flour, and butter, or of fresh beef thoroughly steamed. This usually takes the place of butter, and the children are very fond of it on their bread.

COST PER CAPITA.

During the financial year ending June 30, 1881, the number of children on our rolls averaged 308. These were supported at a total cost, for current expenses, of $35,887.99, or at a per capita cost of $116.42. During the same period, 112 were placed in families, in addition to the above number, making the total number of children provided for that year, by the State Public School, at this institution, or in families, and of whose support the counties were relieved, 420, at a per capita cost of $85.44. The current expenses for the past year amounted to $37,200.26. The average number on our rolls was 311, and the cost per capita was $119.61. One hundred and eleven children were placed in homes permanently, making the whole number provided for by this institution the past year, 422; the per capita cost of whose support was $88.15.

The high price of provisions has somewhat increased the cost of running the institution over that of former years, as is seen from the above statement. The great productiveness of our little farm the past year has prevented the cost from swelling still higher.

As the place of every child sent out to a home is immediately filled by

another brought from the county houses that must be provided at once with two suits of clothing throughout, it can readily be seen that the cost of running this institution is largely increased when a large number of children are placed in homes. The one hundred and eleven children placed out the past year, and about the same number the previous year, have not cost the institution less than $1,000 each year more for clothing than if they had remained with us. This would amount to more than three dollars per capita on the average number in the school during the past two years, and would have reduced the per capita cost of supporting the children by that amount, making it for 1880–1, $113.42, and for the year 1881–2, $116.61.

Farm.

The farm has been more productive the past summer than ever before. In the summer of 1881, the great drouth shortended the crops of all kinds, and almost ruined the potato crop; so that we were obliged to purchase about 600 bushels of potatoes at high prices. But this year we have grown nearly all of the fruit and vegetables we shall need to carry us through the coming winter and spring. About two-thirds of the milk used has been produced from our own cows. If we had more land, so as to enable us to keep eight or ten more cows, we could produce all that is needed.

Four years ago this fall something over an acre of land was planted with Snyder blackberries. This year the canes produced over 100 bushels. For five weeks the tables of the entire institution were supplied with this healthful and delicious fruit. Six hundred quarts were canned, and 27 bushels were sold at $3.84 per bushel. Among other leading articles produced on the farm were 420 bushels turnips, 669 bushels of potatoes, 3,200 cabbages, 600 bushels apples, 26,321 quarts milk, 47 tons hay, and 3,686 pounds pork.

Amusements and Recreations.

The children have all frequently picnicked in the woods and orchards with their teachers and cottage managers. The older boys have also gone to the lake with the farmer several times to bathe. Not a few of them have attended socials and other church entertainments in the city. As in former years, the officers of the Branch County Agricultural Society have kindly extended invitations to the whole school to visit the fair. All of the holidays have been appropriately observed, and made memorable occasions to the children. Bountiful turkey dinners were served on Thanksgiving and Christmas, and on the latter day presents were distributed to all the children, purchased with the interest of the "Kittie Bagley Fund," which was presented by ex-Governor Bagley for this purpose, in memory of his little daughter Kittie, who died many years ago.

The "Fourth" was celebrated by the firing of guns, a procession, the reading of the Declaration of Independence, patriotic songs, speeches, an extra dinner, a picnic in the orchard, and a very fine display of fireworks in the evening. A fine stereopticon, arranged for giving dissolving views, has been purchased, and with its aid many amusing and instructive entertainments have been given. A further expenditure of from $50 to $100 for slides would give us a fine collection, and add much to the pleasure and profit of these entertainments.

It is very desirable that, at as early a day as possible, a playhouse for the

children in stormy weather shall be erected, similar to that recently built at the Reform School. Through several months of the year this is a real *necessity*, and there are many hot or stormy days in each month when such a building would promote the health, happiness, and good morals of the children.

DISCIPLINE.

The question is many times asked how the children are disciplined. In answer I have to say, generally, that the character of our government is paternal. The majority of the children are kept in order by the rules and general system of the institution without resorting to any or much punishment. But all cannot be so governed. Some are very disobedient and vicious, destructive of property, overbearing and oppressive towards their fellows, untruthful and dishonest, and resort must be had to such punishments as are best suited to their years, dispositions, and offenses. What will reach one child effectively, makes no impression upon another. The circumstances of the particular case in hand can alone determine the punishment.

It has been claimed by some institutions that they do not use corporal punishment. A careful and somewhat extended investigation of this claim has convinced me that they must have *forgotten*. I am convinced that there is not a child's institution in the country where corporal punishment is not occasionally resorted to as the most effective punishment for some children. This institution has never made any such pretensions. As a last resort, when all other things have proved ineffective, a few strokes, from two to ten, as the case may be, are given on the hand with a light switch or leather strap. This is usually sufficient. At least I am satisfied that if such a moderate punishment fails, greater severity would, in time, tend to harden instead of softening the culprit. Placing children in bed for a part or all of the day, depriving them of play, giving them bread and water for one meal, or shutting them up by themselves in a cheerful room where they may have time to reflect and come to themselves, I find sometimes quite effective. In all cases more depends upon the spirit and manner of the person administering the punishment than upon the punishment itself. I know that there are persons who disapprove of all these or any punishments, but I think that eight years' experience, with twelve hundred children, such as come to us, would considerably modify their views, and they would discover things not dreamed of in their philosophy. It will still ever be true, however, that the "minimum of punishment is the maximum of excellence."

IMPROVEMENTS.

With the appropriations made by the last Legislature many important improvements have been made. Twenty-five hundred feet of drain tile have been laid in the farm, the play grounds, and around the buildings. A new fire well, eight feet in diameter, with an average depth of eight feet of water, has been dug and so connected with the old one that our large force pump can draw from both for domestic or fire purposes. An earth cellar 18 by 38 feet, with a capacity for storing about 1,500 bushels of vegetables, and a coal-house, with a capacity for 500 tons of coal, have been constructed. The hog pen has been enlarged, and all of the buildings have been moved from the east to the west side of the play-ground. The cow barn has been raised and a basement built under it, furnishing room for seventeen cows. The gas and

water pipes have been extended into both barns and the horses and cows can now be watered inside of the buildings. A better arranged and more convenient barn than our cow barn is seldom seen.

The most important improvement of all is the erection of gas works, during the last summer, which enables us to manufacture our own gas at a much lower cost than we even anticipated and of most excellent quality. The retorts, machinery, and holders were furnished and erected by the United Gas Improvement Company, of Philadelphia. The cistern and buildings were built by the day. The gas is manufactured from crude petroleum, which is passed through a retort brought to a white heat, after which it is purified by passing through a scrubber, when the tar and all impurities are extracted. Our holder has a capacity for 5,000 cubic feet of gas and is placed in a substantial building erected for the purpose. It can be filled in ten hours with a little attention from the engineer. This amount of gas lasts from three to ten days, depending upon the season of the year. The oil is procured by the car load and is stored in a 60-barrel iron tank built for the purpose. Sixty barrels will probably last about one year and costs about six and one-half cents per gallon, most of the cost being the transportation.

The success of this improvement exceeds our most sanguine expectations. From 260½ gallons of crude petroleum we made 36,583 feet of gas of about 23 candle power. In heating the retort 3,875 pounds of soft coal were used. The cost was as follows:

260½ gallons oil @ 6.4c	$16 67
3,875 pounds coal @ 22c. per hundred	8 52
Total cost of 36,583 feet gas	$25 19

This gives an average cost of 68 cents per thousand feet.* The labor was nothing, as no extra help is employed, and it takes but a few hours of the engineer's time each week from other duties. This amount of gas lasted 54 days, costing us on an average 47 cents per day to light the whole institution. For the same period of time it has cost us on an average the last six years, $1.27.

* * * * * * * * * *

A Day Spent at the State School.

Many have quite a curiosity to know how the children pass their time at the State School.

At 5:30 o'clock in the morning, in summer, and at 6 o'clock, in the winter, a fine toned Meneeley bell, weighing 500 pounds, is rung for rising. Instantly, such is the power of habit, the feet of almost every child touch the floor throughout the entire institution. It is rarely the case that a child has to be aroused. As soon as dressed, the larger children go at once to work in the various departments; some to the stables to care for the horses and other stock, and to milk; some to the kitchen and dining-room to assist in preparing the breakfast, and others remain to make the beds and place the cottages in good order. The smaller children amuse themselves with papers, pictures, toys, or play. At 6:15 the first breakfast bell sounds, and during the next fifteen minutes the children gather into their respective cottages and prepare for

* Since the above was written, further experience has shown that it costs us only 60 cents per thousand feet at above prices for material.

breakfast. At 6:30 the second bell sounds, and directly from one of the cottages thirty boys file out, graded perfectly in size, the largest leading, and march to the large dining-hall, keeping step to the beat of a bass drum stationed near the dining-room door. When this company has passed by, another files out from the next cottage, and so on until all the cottages are emptied and the whole school is marching, by companies, in all parts of the grounds. In the large dining-room, 50x80 feet, there are ten tables, one for each cottage. The managers of the cottages preside at the head of the tables to preserve good order and see that each child is properly served. As soon as the room becomes quiet the matron of the Institution touches a bell, when, with bowed heads, three hundred voices unite in saying the following grace:

"We thank Thee O, Lord, for this food, and for all Thy care over us. Give us this day our daily bread, and lead us not into temptation, but deliver us from evil. Amen." All remain quietly waiting until the food is properly distributed by waiters, chosen from among the larger children, and the cottage manager has given the signal.

While they are eating, all of the employés, except the teachers and managers, are breakfasting in another room. After breakfast the children pass out as they came in, orderly and keeping step until they reach their cottages, when they break ranks and rush for the play grounds, and the fun commences in earnest.

At 7:45 the work bell rings, and they again work for about an hour, on the farm, in the shoe shop, in the knitting and sewing rooms, in the laundry, bakery, kitchen, or elsewhere. One of the most attractive sights in the work department is that of the knitting class, where forty boys, all under ten years old, are engaged in knitting socks. They have an instructor, and the class is arranged on benches and is as orderly as a school. Many of these boys can knit quite rapidly and well. Another interesting department is the shoe shop, where a dozen boys mend and make the shoes for the whole Institution. The present foreman of the shoe shop was formerly one of our boys, and now works on a salary. The children in these two departments receive a small premium for each pair of socks knit or shoes made, to stimulate them. They never have to be urged to their work, but are always waiting for the work bell to ring.

At 9:30 the children assemble for school. Six competent teachers are employed to instruct them. Each teacher has from 40 to 60 pupils under her care. The six school-rooms are bright and cheerful, and furnished with the best kind of school furniture and appliances. The grades are similar to those of public schools everywhere. Oral instruction is largely given. Reading, writing, grammar, history, drawing, geography, and arithmetic are taught. The children go out to homes too early to show complete results. Some of the children become fine penmen and show considerable skill in drawing. The great majority of the children do not know their letters when they enter the school. In one part of the building, during school hours, telegraphy is taught to a class of about a dozen children, most of whom are in some way crippled. This class is instructed by two of our own boys, who are good operators and can readily read from the main line, and will, without doubt, get good positions as soon as they become a little older. The first scholar who received instruction in this class, and who had lost a limb, secured a position last April at $55 per month, which he still holds. Our office, which is connected by a line of a mile and a half in length with the city office, furnishes fine opportunities for the children to learn.

At 12 o'clock dinner is served, and, after dinner, they work or play until 2 o'clock, when they are again instructed in school until 4: 30 o'clock. After school they play until 5: 30, when they assemble for tea; and after tea, all who do not have special duties to perform in the dining-room have another hour or two for play.

At dusk they assemble at the ringing of the cottage bells in their respective cottages for evening worship, to study their Sunday-school lessons, and to receive moral and religious instruction from the cottage managers. Here the events of the day are talked over, errors and missteps are pointed out, and new resolutions, not always kept, to do better in the future are made. Strangers strolling through the grounds at that hour, looking into the brightly lighted rooms where the children are gathered, or listening to the volume of song pouring out of every cottage, are usually deeply impressed, and often express themselves as proud of the State that has provided such homes for these little waifs. Directly after worship the children begin to go to bed, the smallest ones, who are already sleepy, first. But the older ones are allowed to sit up to a somewhat later hour if they wish to read, study, or play games. But before 9 o'clock every child is in bed, and at 10 o'clock all the lights of the institution, save a few dimly burning in the halls, are extinguished, and silence broods over what had lately been a scene of intense activity.

On the Sabbath religious exercises are held in the chapel in the morning, and, at 3 o'clock P. M., the children meet in the chapel for Sunday-school. The largest children attend church in the morning in the city.

General Results.

In presenting this report, I am reminded that the State Public School has well entered the ninth year of its career, a period long enough to test, in a measure, many of the theories which have been held respecting it.

Have the expectations of its projectors been realized? As a child-saving institution, is it accomplishing a good work?

I propose, in answer to these questions, to give a few facts respecting the workings of this institution.

Since the opening of the State Public School, May 21, 1874, 1,231 children have been received. Of these, 824 were boys and 407 were girls, showing that the ratio of boys to girls has been that of two to one. About fifty per cent of the whole number are the children of intemperate parents, seventeen per cent are the children of criminals, about half of them were orphans or half orphans, quite a large number were illegitimates, and perhaps thirty per cent were the children of respectable, though poor, parents. The great majority had received little mental or moral training previous to entering this school, and their environment had been exceedingly bad. They belonged emphatically, as a whole, to that class of neglected children whose steps tend downward and from which criminals and paupers come. A large percentage of these children, just how large it is not easy to determine, had been placed in one or more homes previous to entering this school, but, for various reasons, had failed to give satisfaction. Quite a number of them had been arrested for offenses against the law and convicted, but sentence was suspended and they were sent to this school. Some of them could not be controlled by their parents, and, while sent here as dependent children, were more proper subjects for the Reform School than for this institution.

The objection that has been made to institutions of this character by strangers unacquainted with the working of this, that it makes it too easy for the poor to become relieved of the support of their children, does not obtain here. Until dire necessity requires it, the poor are rarely found willing, in our State, to surrender their children to come to this institution, where they are liable to be soon placed in homes. As a rule, they are totally dependent, and are so pronounced by the probate judge in his order which commits them to the care of this institution.

Such is the material out of which this school is composed. What becomes of these children? Five have absconded from the school, 34 have died, 131 have been returned to the counties from which they came, 311 are still on our rolls, and 748 have been placed in homes. Of those returned to their counties 27 were feeble-minded, 23 were diseased, 61 were regarded as more proper subjects for the two Reform Schools, and about 35 of these have since been sent there, so far as I can ascertain, while 20 have been returned to their counties in form only, for the reason that they were old enough to take care of themselves, and were anxious to do so without being bound out. Several of these are earning from twenty to fifty dollars per month, and assist in taking care of their parents.

Of those placed out, 178 were indentured to their own parents, whose affairs had improved, or to near relatives who had kindly stepped forward to provide a home for them. From such, ordinarily, no reports have been received, as many of these families have removed into distant States.

So far as can be ascertained, about 80 of the whole number placed out have left their homes. The reasons for their so doing are various. Quite a large percentage of these have been seduced away by their own friends. I find that it will never, or seldom ever, do to inform parents of the whereabouts of the children, as they manage in some way to make them discontented, or so annoy their guardians that they prefer to surrender them. But it is not always possible to prevent this. The older children can usually write to their parents, and often the guardians, out of sympathy for the children and parents, invite correspondence and visits, which ends in the child's absconding.

Another prolific source of trouble, in this respect, is the unwise interference of neighbors, who, either through enmity towards the guardian, or to promote their own interests, make the children discontented with their homes, even when they are first-class, and induce them to leave, telling them that they can do much better by striking out for themselves. Others leave their homes because they are naturally restless, and would not be contented long anywhere. And others, still, because they have some real cause of complaint against some of the family and are unhappy. It is remarkable that with all these disturbing causes so few leave their homes. But while we regret that all do not remain in homes that are really good until they have served out their apprenticeship, it does not, by any means, follow that all who abscond go to the bad. The reverse is quite true. We frequently hear of boys who left their homes years since, whom we had lost sight of for a long time, but who have turned out well, are earning good wages, have good, industrious habits, are attending school every winter, and have already laid up several hundreds of dollars. A number of these have visited us, and we found them gentlemanly in their manners, intelligent, and well dressed. One boy, now nineteen years old, who has laid up over $200 in the past two years, besides attending school all last winter, said to me, "Isn't this better than to have stayed where

I was bound till twenty-one years of age and then get $100?" I could not deny that it was a good thing for him.

The fact is that, while labor is so scarce and wages are so high, many strong, active boys will be induced to leave their homes on arriving at the age of sixteen or seventeen years.

Eliminating those who have been placed with relatives, those who have left their homes without permission, and a few who have been sent by magistrates to the Reform School, leaves about 525 who should be, and probably are, still remaining in families. Earnest efforts have been made to secure reports from all of these in time for this report, but without success. Many of our county agents have reported promptly but quite a number have not.

The following statement, abstracted from such reports as have reached me, will show what proportion of the children are doing fairly well: Of the 446 from whom reports have been received, 356 are reported obedient, 90 disobedient, 370 industrious, 76 not industrious, 356 improving morally, 90 not improving, 391 liked by guardians, 55 not liked. * * *

I would remark in this connection that when a child is first placed in a home our work in its behalf is only just fairly commenced. The child or guardian must be frequently corresponded with, and at least once a year, and many times oftener if the necessity arises. Difficulties between child and guardian must be adjusted, and quite frequently the child must be changed to several homes before it is permanently located. Great care is taken by the management of this school to avoid, as far as lies in their power, the placing of children in bad homes. But the responsibility rests almost entirely on the county agents, and no care on the part of the officers of the School can prevent this unless the agents themselves are extremely conscientious and careful.

Very few of the applicants for children ever visit the School in person, and no children are ever apprenticed until the agent has stated in writing that "after a careful investigation he approves of the home and believes that the applicant will faithfully execute the contract indenturing the child to him."

Notwithstanding all this, some unworthy applicants have been recommended, and some children, not a very large number, it is to be hoped, have been placed in poor homes. Perhaps no amount of care on the part of county agents could prevent this entirely. As the charge against this institution, of carelessness in placing out children, has come from a few persons, I will here say that the management of this institution has never agreed with those who seem to think that "almost any home is better than the best institution," and that about all that is necessary to save this class of children is to push them out into homes as rapidly as possible. But while fully believing that a good home is a better place than any institution for all children that can be controlled by ordinary family influences, it is also believed that such homes can not be found by the wholesale, and that great care should be exercised in selecting them. It takes something more than a "farm of eighty acres" to make a good home. Many people are not qualified to care for and train their own, to say nothing of other children. Then, too, there are children who are exceptional, and, for some years at least, can be controlled more successfully in an institution than in a family. Many children who had been placed in homes before they came here, or who have been repeatedly placed out after coming here, but proved to be incorrigible and developed badly in families, have afterwards done well in the school and been fitted for homes, and are now respectable young people.

Conclusion.

It has not been the custom at this institution to scatter compliments profusely, but I should like to say that we have never had a more efficient force of workers, as a whole, than the present one, from the highest to the lowest grade. Harmony has usually prevailed, and it would be difficult indeed to organize a new working force with so many members thoroughly fitted for their several positions. This does not mean that there is not room for improvement on the part of some, and that there are not degrees of efficiency among so many; but, upon the whole, their work has been very satisfactorily done, and I wish to thank all for their efficient and cordial support.

I wish, also, to thank the *Coldwater Republican*, *Lansing Republican*, *Deaf and Dumb Mirror*, *Grange Visitor*, and *Church Helper* for copies of their papers, Hon. James Burns for half a barrel of candy for the children last Christmas, and Hon. James Snow of Muskegon for two bushels of choice grapes sent the children, and Ex-Mayor Tibbets and the manager of an entertainment for a matinee at the opera house.

With thanks to you, gentlemen, for your forbearance, I am,

Yours respectfully,

LYMAN P. ALDEN,
Superintendent.

ADRIAN COLLEGE.

REPORT OF THE PRESIDENT.

Hon. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—I have the honor to submit the following report:

Generally speaking, the work accomplished both by faculty and students during the past year in Adrian College, may be regarded with great satisfaction. The faculty throughout the year has been harmonious in its action as a body, and its deliberations have been characterized by good feeling. Severally its members have manifested diligence and faithfulness in the duties of their respective positions. The students in the main have exhibited an earnest interest in their studies and a commendable propriety in their conduct. A strong moral sentiment in favor of orderly conduct and manly habit exists among our students, and to this, I think, can be referred the absence of much of that rowdyism, and of many of those demoralizing influences that are to be found in many American colleges.

ATTENDANCE.

The whole number of students enrolled during the past year is two hundred and twenty-two. This is an increase over any enrollment within the past twelve years in the history of the college. The number graduating at this last commencement is as follows: In the literary course, six; in the school of music, six; in the normal school, eight; total, twenty.

LITERARY DEPARTMENT.

The course of studies in the literary department the past year has been slightly changed. A re-arrangement of the Latin and Greek studies by which they have been made to correspond with collateral studies in other departments has been effected, and, at the same time, the standard for entrance into the college course has been advanced in these branches. The Latin has been under the charge of Prof. A. E. Sanford, principal of the ladies' department, and the advanced classes in Greek have been under the care of Prof. J. D. Cornelius. Their work has been such as to merit commendation.

The department of physics and chemistry has been under the care of Dr. H. W. Eaton for the past year. Dr. Eaton came to our college at the beginning of the year from the University of Leipsig, Germany, where he had spent three

years working in the laboratories of that celebrated institution. Thorough work has been accomplished by the classes under his charge.

During the year a new working laboratory for the students in chemistry has been completed. The accommodations for students in chemistry previously were insufficient.

The executive committee appointed Mr. C. E. Wilbur, an alumnus of the College and more recently a graduate of Yale Divinity School, Assistant Professor of History and Political Science; also, Mr. Wilbert Ferguson has been appointed Assistant Professor of Latin and Greek.

The normal school, during the past year, under the direction of Prof. E G. Walker, has shown an increase both in the number of students and in the interest of its work.

School of Music.

This department of the college has been under the successful direction of Prof. Rupp. Six graduates go out from the instrumental department this year. The patronage of this department is encouraging. The vocal department, for the last term has been under the care of Miss Fannie George, a former student of this institution. Miss George has spent several years in Germany and France, under the tuition of some of the best vocal teachers, and her wide opportunities for instruction, together with her excellent natural adaptations, qualify her for a high order of success in this work. The progress of pupils under her care during the past term has been very satisfactory.

School of Theology.

A three years' course in this school was planned several years ago. Since then classes in systematic theology, homiletics, natural theology, and Greek testament have been taught regularly. But it was felt that theological instruction should be more complete and thorough than with past arrangements, so at the meeting of the board in June the school of theology was reorganized by making Dr. G. B. McElroy dean of this school, and continuing him as Amos Professor of Systematic Theology. Alfred P. Powelson, a graduate of Adrian College, and recently Fellow of the Divinity School at Yale College, New Haven, was elected Professor of Church and Doctrinal History. Rev. S. K. Spahr, an alumnus of Adrian College, and for some time an attendant at Wittenberg Theological Seminary, has been engaged to give instruction in homiletics. Prof. M. L. Jennings will give instruction in Greek Testament and Hebrew, and the President of the College will teach natural theology.

Improvements.

North Hall, destroyed on Nov. 21, 1880, by fire, was completed during the early part of the year, at a cost of about thirteen thousand dollars. It proves to be a great improvement over the former building. The first floor, instead of being used for dormitories as formerly, is given up entirely to public purposes. Several recitation and lecture rooms with the college library, offices, and bath-room are comprised on the first floor. The second and third floors are used for dormitories, the plan of which is an improvement on the rooms in the building before the fire. The library accommodations are very good so long as as the library remains near its present size. The room is light, airy, and com-

fortably provided with facilities for using and referring to the books, and is supplied with leading periodicals of the day.

DEGREES.

The conditions required for obtaining the degrees of bachelor of arts, bachelor of science, and bachelor of philosophy have been somewhat changed, and are as follows:

The degree of bachelor of arts will be conferred on the completion of 750 hours of work in the department of classics, together with a sufficient number of courses in other departments to amount in all to 2,200 hours.

The degree of bachelor of science will be conferred on the completion of 750 hours of work in the departments of mathematics, physical sciences, and natural history, together with a sufficient number of courses in other departments to amount in all to 2,200 hours.

The degree of bachelor of philosophy will be conferred on the completion of 750 hours of work in the the departments of English literature, philosophy, history, and political science, together with a sufficient number of courses in other departments to amount in all to 2,200 hours.

Respectfully submitted,

D. S. STEPHENS,
President.

ALBION COLLEGE.

REPORT OF THE PRESIDENT.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—I have the honor herewith to present my report for Albion College for the year 1882.

Since my last annual report the Faculty of the Institution have devoted much time to the consideration of the methods and order of college work—in other words to the problem of the unfolding of the intellect through college systems and agencies. One conclusion reached is that the prevailing methods are unphilosophical, and hence radically defective.

All psychologists tell us that the logical and chronological antecedents of knowledge are not identical. The chronological consists of phenomena and properties or attributes. These giving the occasion always precede in point of time the affirmations of reason which supply a logical basis for experience. Chronologically, it is facts before principles, the concrete before the abstract, objects before their explanation, the what before the why.

This lesson, which all experience teaches us, should not be disregarded in college plans and work. The universal voice of history in the building up of every temple of science, in the successful unfolding of the principles of philosophy, in the progress of civilization, in the utilization of nature's laws, as well as in the development and enlightenment of the individual human intellect, declares that we come to the logical through a chronological antecedent which lies at the opposite extreme from the logical. All phenomena rest on a logical foundation, but we invariably find that which rests on the basis before we find the basis itself. Our knowledge is not complete till we discover the foundation, but chronologically it is the last though most important factor of our knowledge. To instruct a child by discarding all concrete illustrations or exemplifications of principles is wholly condemned by God's method of projecting his own grand thoughts before us in nature.

We have, therefore, reconstructed our courses of study so as to commence with the near, that which we can behold from our present standpoint, and proceed to that which is more remote. We take the concrete and through it develop the principles on which it rests. We go from the known, which touches us on every side, to the unknown, which has given rise to the known. We reach causes through effects with which we are familiar, or with which we

may easily become familiar, and then strike out after God's plan in developing the wonderful system he has established. It is evident we must begin at a point opposite to that from which Omniscience begins. God commences with the universal, and gives us the particular as a partial illustration of the universal. Man begins with the particular and gradually moves towards the universal. The finite cannot proceed by the same method as the infinite.

We have, therefore, planned our work so as to follow nature's order in all cases in which we understand that order. In history we first look at its outcome in the condition of the world to-day, and then seek for the forces which have wrought out the civilizations which exist on the two continents. Understanding the life of the 19th century we are prepared intelligently to trace out the causes which have produced these effects. We take up philosophy in the careful consideration of the human mind phenomenally and dynamically, determining the present accepted analysis of the soul, and afterwards turn our attention to the history of psychological and metaphysical speculations. We teach science before the history of science.

In language we proceed from the English to contemporaneous foreign languages, and when these have been pretty thoroughly mastered we take up the Latin and Greek. We adopt this order in the languages for several reasons:

1. The step from the English to the French and German is much less than from the English to the Latin and Greek, and common sense would dictate that we take that which lies nearest to us.

2. Among the first results to be sought with the youth is the deepening of interest in study, an inspiration growing out of a love for that which engages his thoughts. This can be more readily secured in the average student by setting him at work on a living rather than a dead language.

3. The ancient languages are eminently inflectional and therefore present very difficult problems to the student. To solve these problems most easily he needs the knowledge and discipline that can be gained by studying the languages of to-day.

4. Not only may the Latin and Greek be more readily mastered after gaining a thorough knowledge of French and German, but a more living interest will be taken in these ancient tongues, and the incentive to scholarship is greatly augmented.

Therefore, in putting the modern before the ancient languages we believe we have taken a step in the right direction, and that in the study of language we have adopted the order of nature, and are rendering service to sound and liberal education. We devote two years to the study of modern languages before we take up the Latin, and three years before we take up the Greek. Thus we hope to make better scholars in both ancient and modern tongues.

Albion College has six distinct courses of study, designated the *Classical, Latin, Greek, Scientific, Latin Scientific,* and *English and Modern Language* courses. These courses are unlike from the beginning of the first preparatory year, but separate most fully at the beginning of the junior year. Aside from the classical, they are arranged for the benefit of specialists.

The trial of one term which we have given to our new order greatly encourages us in the work on which we have entered. The attendance at the College has increased, and with it the interest in study. Many have been attracted by the method, and express themselves fully in sympathy with it.

We have added one more year to our preparatory courses. By this means we shall be able to test more rigidly the merit of our "new departure."

In the junior and senior years we have introduced quite largely university methods. By this I mean that a considerable preparation of the work will not be carried forward by daily recitations, but through a system of individual investigations on the part of the student in connection with the advice which the teacher supplies as it may be required.

The attendance in the conservatory of music has nearly doubled during the year. Four teachers are now employed in this department, and a four years' literary course is provided for all who desire to attain the degree of Bachelor of Music.

The school of painting is making steady advancement, and provision now exists for giving instruction in all those branches which will entitle the student to the degree of Bachelor of Painting.

Many additions have been made to the museum during the past twelve months, compelling the construction of six large cases.

Some valuable apparatus has been put in the laboratory by which quantitative analysis can be more extensively carried forward.

The library has received some very useful books, as we are now engaged in supplying works which furnish facilities for the better working of the several departments. The largest work done in the library during the year is the re-cataloguing of the books on an improved and much more exhaustive plan. We are now making every part of the library useful to the student in the prosecution of his daily studies.

The funds for the erection and equipment of an astronomical observatory are mostly raised, and we hope to have the building up and instruments in their place before the time for our next report.

In many respects the past year has been productive of more that enters into the history of a living, progressive college than any similar period during its existence.

All of which is respectfully submitted.

L. R. FISKE, *President.*

DETROIT COLLEGE.

REPORT OF THE PRESIDENT.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—In compliance with the laws of the State of Michigan, I have the honor to submit the following report of the condition of the Detroit College for the session ending June 28, 1882:

OFFICERS OF THE INSTITUTION.

Board of Trustees.

Rev. J. G. Walshe, S. J., President.
Rev. J. P. Frieden, S. J., Secretary.
Rev. Dominic Niederkorn, S. J., Treasurer.
Rev. J. F. Real, S. J.
Rev. J. N. Polland, S. J.

Faculty.

Rev. J. G. Walshe, S. J., President.
Rev. J. P. Frieden, S. J., Prefect of Studies and Discipline.
J. A. Doyle, S. J., Professor of Physics and Chemistry.
Rev. J. W. Poland, S. J., Professor of Rhetoric and Elocution.
J. J. Conway, S. J., Professor of Poetry and Humanities.
G. A. Hoeffer, S. J., Professor of German and Instructor in First Academic.
J. A. Doyle, S. J., Instructor in Second Academic.
J. P. Desmedt, S. J., Professor of French and Instructor in Third Academic.
J. H. Meuffels, S. J., Instructor in the Commercial Classes.
J. J. Donoher, S. J., Preparatory Course.

MATRICULATION.

No fee for matriculation is required. The institution is open to students of every denomination. Candidates for admission, after an examination by the Prefect of Studies or by a board of examiners under him, is placed in that class for which his previous qualifications have fitted him. The records for

the past session indicate a regular attendance of one hundred and fifty-seven: 21 in the scientific-collegiate, 77 in the academic, 38 in the commercial course, with 21 in the preparatory department.

Courses of Instruction.

There three courses of instruction: the scientific-collegiate, the academic, and commercial courses. The scientific-collegiate comprises four classes: philosophy, rhetoric, poetry, humanities, and embraces, together with the ordinary studies of the classical course, the study of logic, metaphysics, ethics, astronomy, natural philosophy, chemistry, and the higher mathematics. Diplomas are granted to those students only, of this department, who have attended lectures in the sciences for at least three sessions, and who have passed a satisfactory examination in chemistry, natural philosophy, and the higher mathematics, as well as in the several branches of the collegiate course. Students failing in the scientific examinations graduate with secondary honors. The academic department is preparatory to the scientific-collegiate, and corresponds to the high schools of our country. It aims at imparting a thorough Latin, Greek, and English ante-collegiate instruction, together with a comprehensive knowledge of physical geography, elementary mathematics, book-keeping, and history. The commercial course embraces all the branches of a good English education, is completed in four years, preparing students for business or commercial pursuits. A class of rudiments for young students unqualified to enter the lower classes of the academic or commercial courses, has been opened to supply the necessary preparation.

Scholastic Proficiency.

The class standing and progress of each student is ascertained by a system of monthly competitions and by examinations. There two examinations of all the classes annually, the first at the end of January, the second at the end of June. In each of these semi-annual examinations the several classes are submitted to a severe test in all the branches studied during the previous half year. Any student failing in the January examination descends to a lower class, unless he supplies for his deficiency within a specified time, and meanwhile performs satisfactorily his ordinary class work. Failure in the June examination debars a student from advancement to a higher class. During the session students are promoted when, by successful efforts, they have fitted themselves for a higher class, and such promotion is held to be equivalent to to the honors of the previous class.

Moral Advancement.

For the maintenance of good order and discipline, without which good results are unattainable, strict obedience, assiduous application, and blameless conduct are required of every student. Any serious fault touching these essential points renders the offender liable to effective correction, and even of dismissal, if this be deemed necessary by the faculty. Three times a year reports are made to the parents or guardians of the students, to inform them of the conduct and improvement of their sons and wards. Catholic students are required and exhorted to a frequent exercise of their religious teachings.

Libraries.

The college library, which is altogether dependent upon private resources, numbers, notwithstanding, upwards of three thousand volumes. The students' library, at their exclusive disposition, is a very choice selection of leading works in the various departments of English literature. The object of the institution in this is to encourage good and useful reading and to counteract the moral and intellectual evils wrought by a too promiscuous, trashy, and pernicious literature. During the past year the students and their friends have added several new volumes to the library.

Societies.

The Philomathic Society has been organized among the students of the scientific-collegiate department to foster a taste for eloquence and literature. Its members meet once a week to exercise themselves in dramatic reading and extemporaneous debate. Carefully prepared essays on historical subjects are read and discussed twice a month. During the past year special attention was given to the early history of Michigan.

Prizes.

An interesting feature of last year's class work was the competition for gold medals in the evidences of religion, history, and elocution. The offices of the institution are eager to express their admiration of the zeal manifested by the generous donors of these medals, who were Rev. Charles Reilly, D. D., and Hon. W. B. Moran, of Detroit, and Mr. P. Poland, of Cincinnati, respectively, Their example has proved an incentive to the emulation of others who have kindly offered other medals for the following session.

JAS. G. WALSHE, S. J.,
President.

DETROIT MEDICAL COLLEGE.

REPORT.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

DEAR SIR,—The annual report of the Detroit Medical College should have been made at the end of the fiscal year, on July 1st, but was delayed on account of the absence of the President of the Faculty in Europe.

In the summer of 1880-81, it became necessary, on account of serious dissentions in the Faculty, to completely re-organize that body. This could not be done without creating some ill feeling and dissatisfaction, which re-acted upon the class, causing disaffection of a portion, and thus reducing its numbers. Although the immediate effect of the re-organization was injurious, the ultimate result—by producing unanimity, and thereby adding to the efficiency of the Faculty—will be, it is believed, highly beneficial. As at present constituted the Faculty consists of the following members:

FACULTY.

Theo. A. McGraw, M. D., President.

H. O. Walker, M. D., Secretary.

Theo. A. McGraw, M. D., 107 Fort street west, Professor of Principles and Practice of Surgery and Clinical Surgery.

N. W. Webber, M. D., 25 Rowland street, Professor of Gynæcology and Obstetrics.

H. O. Walker, M. D., 177 Griswold street, Professor of Orthopedic Surgery, Genito-Urinary Diseases, and Clinical Surgery.

E. L. Shurly, M. D., 544 Jefferson Avenue, Professor of Laryngology and Clinical Medicine.

J. H. Carstens, M. D., 21 Macomb street, Professor of Obstetrics and Clinical Gynecology.

J. G. Johnson, M. D., 33 High street east, Professor of Diseases of the Mind and Nervous System.

A. E. Carrier, M. D., 650 Third avenue, Professor of Anatomy and Dermatology.

A. S. Heaton, M. D., 439 Woodward avenue, Professor of Clinical Medicine.

Eugene Smith, M. D., 217 Fort street west, Professor of Ophthalmology and Otology.

E. A. Chapoton, M. D., 372 Woodward avenue, Professor of Principles and Practice of Medicine.

David Inglis, M. D., 21 State street, Professor of Principles and Practice of Medicine.

Thomas N. Reynolds, M. D., 88 Lafayette avenue, Professor of Materia Medica and Therapeutics, and of Clinical Medicine.

J. W. Robertson, M. D., 115 Cass avenue, Lecturer on Laryngology and Physical Diagnosis.

Chas. G. Jennings, M. D., 544 Jefferson avenue, Lecturer on Chemistry and Diseases of Children.

O. W. Owen, M. D., 182 Alexandrine avenue, Lecturer on Physiology and Curator of Museum.

F. W. Brown, M. D., 43 Lafayette avenue, Lecturer on Histology and Microscopy.

A. F. Hoke, M. D., 452 Antoine street, Instructor in Obstetrics.

John Boice, M. D., 107 Fort street west, Instructor in Minor Surgery.

R. A. Jamieson, M. D., 44 Columbia street west, Instructor in Clinical Medicine.

A. S. Parker, Ph. C., 747 Woodward avenue, Instructor in Pharmacy.

A. M. Hawes, M. D., 85 Congress street west, Demonstrator of Anatomy.

Albert Campau, M. D., 633 Jefferson avenue, Director of Clinic at St. Mary's Hospital Dispensary.

M. K. Ross, M. D., 52 Lafayette avenue, Instructor in Chemistry.

L. E. Maire, M. D., 175 Sixth street, Instructor in Materia Medica.

Thad. Warsaw, Janitor, College Building.

At the date of the re-organization, the trustees created a board of counsellors, thirty in number, independent of the Faculty, whose function it should be to conduct the final examinations, and superintend the awarding of diplomas to suitable persons only, thereby securing a higher reputation for the College.

The reasons for such action can only be appreciated by those who are familiar with the practical workings the of present American system of medical education.

The medical schools of the United States, with but one or two exceptions, are un-endowed and are dependent upon their fees for their support. The very indulgent special legislation of some states, and the lax general laws of others, have unfortunately made it easy to establish medical schools with degree-conferring powers. These have therefore sprung into existence all over the country, in numbers beyond the necessities of the community, and with an insufficient number of students the weaker ones have been obliged, in order to live, to resort to means not only scandalous and dishonorable but highly injurious to public interest.

Without entering into unnecessary detail, suffice to say the degree of M. D. has been of such questionable value that physicians of high standing have become distressed and humiliated, and the profession degraded by the employ of great numbers of ignorant and unworthy members. The better class of medical men have, through medical journals and otherwise, urged reform. Failing to secure this, they have manifested their distrust of the schools in many states, by seeking the enactment of laws compelling the examination of all persons about to enter upon the practice of medicine, not excepting even those holding regular degrees.

Under such circumstances it seemed proper that the profession should receive

some guarantee that the degrees of the college were conferred only upon men worthy of such honors. This guarantee the trustees have sought to give by placing the examining function in an independent board, chosen from among the most reputable medical men in the State, who would be bound alike by professional pride, and the obligations of their positions, to establish in the Detroit Medical College a high standard of learning.

This board entered for the first time last spring upon the exercise of its functions, and the enthusiasm of its members. and the zeal with which they began their work anger well for the future of the institution.

As regards its facilities for educational purposes the college was never better equipped: The chemical laboratory, with tables and furniture for the simultaneous instruction of 24 students; the pharmaceutical laboratory prepared for 20 students; the physiological and histological laboratories with tables, microscopes, and apparatus for 30 students; the dissecting room, with ten tables; supply all needful facilities for the instruction of junior students in the fundamental branches. The clinical work of the college is distributed among three hospitals and two dispensaries for outside patients, where senior students are obliged to fit themselves by practical experience for future professional service.

The library of the college contains about two hundred volumes, while measures will be taken in the ensuing year, not only to increase its size but to augment its usefulness.

The College owns the buildings wherein it is at present located, the land being leased from Harper Hospital. The trustees have purchased, besides, during the past year, for fifteen thousand dollars, the building recently occupied by the Young Men's Christian Association. Five thousand dollars were paid down in this purchase, ten thousand still remaining due at six per cent interest, on bond and mortgage. There is on hand $987.31, while the College is free from debt.

During the last year there were forty-eight students in attendance. The class was smaller than in many years for many reasons, principally because of the recent disruption of the faculty. The temporary character of the causes of this reverse, however, forbids all apprehension for the future. It is expected that in one or two years at most the number of students will reach the old limits. The only difficulty is that the standard of medical education is higher than in many schools in neighboring States, and the temptation to patronize those schools whose honors are easily obtained, is one which many students cannot resist. It is believed, however, that eventually the common sense of the community will correct this evil, and that only such institutions as pursue a course of study consonant with professional dignity and public usefulness can ultimately survive in the inevitable struggle.

Yours very respectfully,

PHILO PARSONS,

Secretary.

HILLSDALE COLLEGE.

REPORT OF THE VISITORS.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—In accordance with the terms of our appointment we visited Hillsdale College, in February last, and spent the greater part of two days in visiting the various classes in this institution. The President and Faculty extended to us every courtesy and every opportunity that we could desire, and our time was spent in the agreeable duty of observing the work of teachers and pupils in the various class-rooms.

It appears to us that a marked feature of Hillsdale College is the unusual amount of work done by students in the literary societies. As these societies are public they admit of easy supervision and control, and by their usual weekly exercises as well as by their annual contests they furnish students with invaluable opportunities for acquiring ready skill in writing and public speaking.

The class instruction to which we listened was in general of a high order of excellence, and we were pleased with the scholarly zeal that was manifested by the several instructors.

We noticed with equal surprise and gratification the large and choice collections that have been placed in the museum within so short a period. The objects themselves are not only of great intrinsic value, but they are rendered doubly valuable by their neat and accurate arrangement.

The commercial department of the college seemed to us of unusual excellence. Penmanship, book-keeping and telegraphy are taught with great thoroughness. There was no evidence of meretricious effort, but the whole work bespoke an earnest effort to train students into accurate business habits.

We were pleased to note that while marked attention is given to mathematical and scientific subjects, an equitable share of attention is given to philosophical and classical instruction. In these times when there are such inducements to surcharge the college curriculum with modern subjects, we think it very creditable that this college should maintain its integrity with respect to the humanities.

So far as we could observe, there prevailed in the college a sincere and well-directed effort to educate rather than to instruct; and our general conclusion is that this institution is very worthily fulfilling its mission, and that it is in a state of growing efficiency.

Respectfully submitted,

W. H. PAYNE,
CHARLES UPSON,
Visitors.

October 14, 1882.

HOPE COLLEGE.

REPORT OF THE PRESIDENT.

Hon. Varnum B. Cochran,
Superintendent of Public Instruction:

Sir,—I have the honor herewith to submit a full and detailed report of Hope College for the year 1882.

Council.

Rev. Charles Scott, D. D., President of the College, *ex-officio*.
Rev. Edward P. Livingston, D. D., Pekin, Ill., 1883.
Rev. Jacob Vander Meulen, Muskegon, Mich., 1883.
Rev. Nicholas H. Dosker, Grand Rapids, Mich., 1883.
Rev. Nicholas M. Steffens, Holland, Mich., 1884.
Rev. Dirk Broek, Holland, Mich., 1884.
Rev. Peter Lepeltak, Overisel, Mich., 1884.
Isaac Cappon, Esq., Holland, Mich., 1885.
Rev. John H. Joralmon, Fairview, Ill., 1885.
Rev. Egbert Winter, Pella, Iowa, 1885.
John C. Benham, M. D., Hudson, N. Y., 1886.
Rev. John H. Karsten, Waupun, Wis., 1886.
Rev. William Moerdyk, Milwaukee, Wis., 1886.
Hon. Horatio P. Allen, New York City, 1887.
Rev. John W. Beardslee, Constantine, Mich., 1887.
Rev. Peter Moerdyk, Grand Rapids, Mich., 1887.

The council met April 26 to 28, 1882, and again June 27 and 28, at the time of the commencement. At the latter meeting the following officers were elected:

President of the Board—Rev. John H. Karsten.
Assessor of the Board—Rev. N. M. Steffens.
Secretary of the Board—Rev. Peter Lepeltak.
Treasurer of the Board—Prof. Cornelis Doesburg.
Executive Committee—Rev. Charles Scott, *ex-officio*, Rev. Peter Lepeltak, Rev. Dirk Broek, Rev. N. M. Steffens, Isaac Cappon, Esq.

Academic Department.

1. Faculty.

Rev. Charles Scott, D. D., President, Professor of Chemistry and Natural History; in charge of Mental and Moral Philosophy, History, and the Evidences of Christianity.

Rev. T. Romeyn Beck, D. D., Secretary, Professor of Ancient Languages and Literature; in charge of Logic and Sacred Literature.

Cornelis Doesburg, A. M., Treasurer, Professor of Modern Languages and Literature.

William A. Shields, A. M., Professor of the English Language and Literature and of Rhetoric; in charge of Latin with the freshman class.

Gerrit J. Kollen, A. M., Librarian, Professor of Mathematics, Astronomy, and Natural Philosophy; in charge of Political Economy, Civil Government, and Didactics.

2. Students in 1881–82.

Seniors, 9; juniors, 9; sophomores, 4; freshmen, 5; total, 27. Eight of the senior class received the degree of A. B., making the total number of graduates 98 in sixteen years.

3. Course of Study and Text-books.

Only a full *classical* course has so far been arranged, but the modern languages are taught throughout the four years, and other branches that are usually called *scientific*. The classes are subjected to careful examinations, and only the completion of the prescribed studies admits to the A. B. degree. Those who take a *partial* course receive a corresponding diploma.

Freshman Class.—Studies in English Literature, Swinton; Practical Elocution, Shoemaker; Cicero de Amicitia, Anthon; Xenophon's Cyropædia, Owen; Greek and Latin Prose Composition, Arnold; Derivation of Dutch words, Jager; History of Dutch Literature, Mulder; Geometry and Trigonometry, Olney; Physiology, Hooker; Ancient History, Anderson; Ancient Geography, with Atlas, Long.

Sophomore Class.—History of English Literature, Shaw; Tacitus, Tyler; Herodotus, Johnson; Greek and Latin Prose Composition, continued; French Grammar, first part, Duffet; German Grammar and Reader, Worman; General Geometry and Calculus, Olney; Surveying and Engineering, Davies; Chemistry, Manual by Eliot and Storer; Modern History, Anderson; Greek and Roman Antiquities; Harmony of the Gospels in Greek, Robinson.

Junior Class.—Philosophy of Rhetoric, Bascom; Horace, Anthon; Plato's Apology and Crito, Tyler; Lectures on Greek and Roman Literature, Prof. Beck; French Grammar, second part, and French Literature, Duffet; German Grammar and Readers, continued; Natural Philosophy, Olmsted; Chemical Analysis (one term); Botany (two terms), Wood; Lectures on United States History and the Constitution, Prof. Scott; Mental Philosophy, Porter; Sacred Literature, Angus.

Senior Class.—Æsthetics, Bascom; Plato, and Lectures on Greek Philosophy, Prof. Beck; Telemaque; Groszmann's German Reader; Lectures on German Literature, Prof. Doesburg; Compositions in French and German; Astronomy, Olmsted; Geology and Mineralogy, Dana; Logic, Jevons; Moral Science, Wayland; Political Economy, Wayland; History of Civilization, Guizot; Lectures on Civil Government, Prof. Kollen; Lectures on Christian Evidences, Prof. Scott. Compositions, essays, debates, and oratorical exercises continue throughout the course, and everything is made as practical as the apparatus on hand allows.

Preparatory Department.

1. *Faculty.*

Rev. Charles Scott, D. D., President, English History, Zoölogy, and Physiology.

Rev. T. Romeyn Beck, D. D., Greek with the A Class, and Mythology.

Cornelis Doesburg, A. M., Treasurer, Dutch, French, German, and Drawing.

William A. Shields, A. M., English Grammar (C, B, and A classes), Rhetoric, and Oratorical Exercises.

Gerrit J. Kollen, A. M., Librarian, Algebra and Geometry, Natural Philosophy, Astronomy, and Science of Teaching.

Henry Boers, A. M., Orthography, Reading, Penmanship, Arithmetic, Latin, Greek and Roman History.

John H. Kleinheksel, Jr., A. M., Geography, Grammar (D class), Bookkeeping, Algebra and Greek (B class), Botany, United States History, and Civil Government.

John Gilmore, Vocal Music.

Rev. N. M. Steffens, A. M., Religious Instruction.

The above faculty is composed of experienced teachers, and as will be seen, provision is made for every branch of an ordinary academy or grammar school.

2. *Students in 1881-82.*

D class 15, C class 15, B class 16, A class 18, total 64, of whom twenty were females, thirty-nine were preparing for a full classical course in the College. The number has made a gratifying increase since the opening of the present school year, being now eighty-nine, of whom thirty-nine are in the D class. Perhaps one-half of the female students desire to fit themselves as teachers in the public schools.

3. *Course of Study.*

The curriculum covers four years, viz., the D, C, B, and A years. Latin begins in the D year, and Greek in the C. French and German may be substituted for Latin and Greek. In a full English course, such elective studies as Botany, Zoology, Physiology may be added.

The following is a schedule of the text books employed in this department:

D Year.—National Fourth Reader; Harrington's Speller; Harper's Geography; Davies' and Olney's Arithmetics; Reed and Kellogg's Lessons in English; Bullion's and Morris's Latin Lessons; Barnes's United States History.

C Year.—National Fifth Reader; Westlake's 3,000 Words; Olney's Science of Arithmetic; Bryant and Stratton's Book-keeping; Reed and Kellogg's Higher Lessons in English; Bullion's and Morris's Latin Lessons, continued; Crosby's Greek Grammar; Van Dalen's Dutch Grammar; Smith's English History. *Elective:* Duffet's French Grammar; Zoölogy.

B Year.—Olney's First Algebra; Mattison's Astronomy; Kellogg's Rhetoric; Harkness's First Latin Book; Bullion's Cæsar; Crosby's Greek Lessons; Van Dalen's Dutch Exercises; Smith's Greek History. *Elective:* Duffet's French Grammar; Worman's German Grammar and Reader; Drawing; Botany.

A Year.—Olney's Complete Algebra; Olney's Geometry; Ganot's Natural

Philosophy; Parsing "Paradise Lost;" Hart's Rhetoric; Harkness, continued; Arnold's Greek and Latin Prose; Anthon's Æneid and Anabasis; Seeman's Mythology; Mulder's Dutch Syntaxes; Smith's Roman History; Young's Civil Government. *Elective:* French and German as before; Physiology; Didactics.

Penmanship, compositions, and declamations continue through the course. Closing rhetorical exercises are held during commencement week. A paper called the "Excelsiora" is published every year by the A class, and is preserved in the library.

FINANCES.

1. Contingent Fund.

Receipts:	
Balance on hand	$78 99
Interest from invested funds	3,757 11
Student Fees	1,135 75
Donations	2,996 66
Other sources	320 70
Total	$8,289 21
Current Expenses:	
Salaries, including janitor	$7,159 68
Meetings of Council	135 48
Buildings and grounds	213 05
Taxes on Real Estate	280 43
Other purposes	300 12
Balance on hand, 1882	200 45
Total	$8,289 21

Leaving no contingent debt during the year.

2. Debt.

Received from donations	$22,282 43
Received from sale of real estate	1,793 38
	$24,075 81
Paid in discharge of notes, etc.	24,075 81
The obligations of the college are now only	1,000 00

3. Permanent Fund.

Held in trust by the General Synod (R. C. A.)	$37,497 78
Invested and held by the Council	18,271 00
Endowment Notes	10,631 00
Endowment money in the printing office	7,724 50
Total	$74,124 28

This is an increase of $13,310.54 since the report of 1881, of which $10,000.00 was a donation from Mr. Garret Kouwenhoven of Newtown, Long Island.

Efforts are in progress to increase the *productive* funds to at least $100,000.00. The "Ebenezer Fund" of $36,000.00 remains as in the last report, and has yielded an income of $929.81.

4. Real Estate.

The amount of land owned by the college and the value of the same is unchanged. (See report of 1881.) The fact may be noted that the annual taxes amount to nearly $300.

Library, etc.

Seven hundred and thirty bound books, a part of them of much value, have been added to the library. Of these 485 were donated by S. B. Schieffelin, Esq., of New York City. The whole collection is now 5,560 volumes, and about 3,000 pamphlets. A fire-proof library building has become an urgent need of the institution. In apparatus and collections of natural history or antiquities there have been no material additions.

Miscellaneous.

The printing office has been leased to Professors Doesburg and Kollen for two years, and these gentlemen now publish the newspaper called *De Hope*.

The college chapel has been much improved in appearance. The painting was done under the direction and at the expense of the students themselves.

A contingent fee of $5 per term and a graduation fee of $5 are the only charges made by the college. Students generally board and room with families in the city.

As yet, no "Board of Visitors" has made a report concerning this institution. This is to be regretted.

And it seems to be necessary to add that the instruction in Hope College is and ever has been given in English. Because the school is at Holland and in the midst of a Hollandish community, it has been supposed by many that its exercises were in *Dutch*. This is altogether an error. Dutch is simply included in the modern language course.

Respectfully submitted,

CHARLES SCOTT,
President.

KALAMAZOO COLLEGE.

REPORT OF THE PRESIDENT.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—As required by law, I present my report of Kalamazoo College for the year ending June 20, 1882.

The Board of Trustees is a self-perpetuating body, one-third of the members of which are chosen each year. In electing new members the Board is not restricted by any requirements of charter or by-laws, as to denominational relations or residence. As most of the original members of the Board were Baptists, so in every subsequent election, the majority have always been of the same denomination. The present members of the Board are as follows:

CHOSEN IN JUNE, 1880.

Hon. Caleb Van Husan, Rev. A. E. Mather, Rev. L. H. Trowbridge, William Bair, Esq., Rev. Frank B. Cressey, A. M., Rev. Theodore Nelson, Ph. M., Rev. T. M. Shanafelt, A. M., Rev. John Donnelly, A. M., Rev. John Fletcher, Edward Olney, LL. D., L. B. Austin, Esq., D. A. Waterman, Esq.

CHOSEN IN JUNE, 1881.

Rev. Samuel Haskell, D. D., Rev. Henry Stanwood, Hon. Henry C. Briggs, A. M., Rev. Ezra J. Fish, D. D., Rev. Kendall Brooks, D. D., Howard G. Colman, A. M., Rev. Jay Huntington, A. M., William L. Eaton, A. M., Daniel Putnam, A. M., Rev. Samuel Brooks, D. D., J. E. Howard, Esq., Joseph W. French, Esq.

CHOSEN IN JUNE, 1882.

I. S. Hamilton, M. D., Chauncy Strong, A. M., Rev. Geo. W. Harris, Rev. Samuel Graves, D. D., Rev. Howard B. Taft, A. M., Rev. Z. Grenell, D. D., C. C. Bowen, Esq., Hon. A. H. Wilkinson, A. M., Rev. J. H. Dudley, Hon. William A. Moore, A. M., Schuyler C. Grant, A. M.

OFFICERS OF THE BOARD FOR THE PRESENT YEAR.

Kendall Brooks, President; Samuel Brooks, Secretary; J. E. Everard, Treasurer; C. C. Bowen, Auditor; J. S. Boyden, Financial Secretary.

EXECUTIVE COMMITTEE.

Kendall Brooks, E. C. Briggs, Samuel Brooks, Chauncey Spring, William L. Eaton, J. S. Boyden, A. E. Mather.

The members of the faculty are as follows:

Rev. Kendall Brooks, D. D., President and Professor of Moral and Intellectual Science; Rev. Samuel Brooks, D. D., Professor of Latin; Alexander Winchell, Ph. M., Professor of Mathematics; Frank D. Kimball, A. M., Professor of Greek; Jacob Piggott, A. B., Instructor in German and French; Miss Marion Chase, Instructor in History; Miss Lena A. Boerner, Instructor in Latin.

There has been no special change in the plans or the condition of the college during the year.

There are three courses of study, alike in the college proper and in the preparatory department. The first of these, leading to the degree of A. B., is called the Classical Course, and includes the Latin and Greek languages as well as all the studies usually required for that degree. The second, leading to the degree of Ph. B., is called the Latin and Scientific Course, and substitutes for Greek a fuller course in History and Literature. The third, leading to the degree of B. S., is called the Scientific course, and substitutes for Latin a fuller course in Science. Each of these courses of study covers a term of four years in the preparatory department and four years in the college proper. There is no distinction of sex in the requirements for admission to these courses.

All which is respectfully submitted,

KENDALL BROOKS,
President.

A.

REPORT OF THE VISITORS.

HON. VALENTINE B. COCHRAN.

Superintendent of Public Instruction:

SIR,—We, the undersigned, appointed by you a committee of State visitors for Kalamazoo College, respectfully report:

On March 24, 1882, we attended the exercises in the several class-rooms. Recitations in languages, mathematics, intellectual philosophy, and history, were in progress. We were agreeably impressed with the ability in the instruction, and the evidences of study and interest on the part of the pupils.

We were gratified with the arrangement of the chapel service, bringing together all the students, and the reverent deportment.

Two of our number were present at the commencement and the attendant public exercises. Four young men formed the graduating class. The speeches, considering that all participated, were very creditable to the thought and training of the graduates.

Your committee would have been glad to accept the courteous invitation of the President in further examination of the institution, had their engagements allowed.

Aside from the relations it bears to the body of Christians specially sustaining it, Kalamazoo College is evidently filling an important place in the educational work of the State. The course of study in the higher classes, and the ability of teaching, warrant the title of a college, even by the side of the University.

The State must be gratified with every provision for the culture that will give her able citizens, and adorn her political and social life. Leaving her people who may desire to educate their children under more positive religious truth and influence than her University can allow, to their own liberality and exertion, she can but cheer them with her approbation and be gratified with their success.

Respectfully submitted,

GEO. D. GILLESPIE.
D. PUTNAM,
A. J. ALDRICH,
Visitors.

OLIVET COLLEGE.

REPORT OF THE PRESIDENT.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—In behalf of the trustees of Olivet College I present the annual report touching its condition. The academical year of 1881–2 is the period covered.

BOARD OF TRUSTEES.

Twenty-five trustees form the corporation of the College, and of this body the President of the Institution is *ex officio* the head. Four members of the board are elected annually.

The following officers and committees have the immediate care of the College:

Executive Committee.—H. Q. Butterfield, O. Hosford, J. L. Daniels, F. L. Reed, A. K. Warren.

Library Committee.—H. Q. Butterfield, J. L. Daniels.

Secretary and Assistant Treasurer.—Geo. W. Keyes.

Treasurer.—Henry Fralick.

Financial Agent.—Rev. W. B. Williams.

FACULTY.

Rev. Horatio Q. Butterfield, D. D., President, and Drury Professor of Mental and Moral Philosophy.

Rev. Henry M. Goodwin, D. D., Professor of Logic, Rhetoric, and English Literature.

Rev. Oramel Hosford, A. M., Stone Professor of Astronomy and Natural Philosophy, and Instructor in Mathematics.

Rev. Joseph L. Daniels, Parsons Professor of the Greek Language and Literature, and Instructor in German.

Rev. Joseph Estabrook, A. M., Principal of the Normal Department.

Stewart Montgomery, A. M., Professor of Natural Science.

Alexander Tison, A. M., Rutan Professor of the Latin Language and Literature.

Geo. H. Howard, A. M., Professor of Music.

Hamilton King, A. M., Principal of the Preparatory Department.

Mrs. Abba C. Hamilton, Principal of the Ladies' Department.
Miss Cornelia P. Dwight, Instructor in Mathematics.
Miss M. Myra Manley, Instructor in Painting and Drawing.
James Fairman, A. M., Lecturer on Art.
Alexander Tison, A. M., Librarian.

Summary of Students.

College:		
Classical course	36	
Scientific course	22	
Ladies' course	44	
		102
Preparatory department:		
Classical course	61	
Ladies' course	26	
		87
Normal department		103
Art department		63
Conservatory of music		61
		416
Deduct for names inserted twice		87
Total		329

Courses of Study—College.

Classical Course.

FRESHMAN YEAR.

First term: Livy. History of Rome. Homer's Iliad and Odyssey. Greek Prose Composition. Greek Grammar. Algebra completed.

Second term: Cicero de Senectute. Latin Prose Composition. History of Rome. History of Greece. Herodotus and Thucydides. Geometry completed.

Third term: Horace—Odes. Memorabilia of Socrates. History of Greece. Trigonometry.

SOPHOMORE YEAR.

First term: Horace—Epistles, Satires, and Ars Poetica. Sophocles—Œdipus Tyrannus. Euripides—Medea. Analytical Geometry (Loomis).

Second term: Tacitus. Juvenal. Plato. Rhetoric.

Third term: Latin Hymns. Demosthenes—De Corona. Surveying (Loomis), or Botany.

JUNIOR YEAR.

First term: German (Whitney's Grammar). French. Logic. Anatomy and Physiology.

Second term: German. French. Chemistry, with Lectures. Natural Philosophy—Mechanics and Hydrostatics (Snell's Olmsted).

Third term: German, or Latin, or Greek. French. Geology, with Lectures. Natural Philosophy—Pneumatics and Optics.

SENIOR YEAR.

First term: English Literature. Mental Philosophy. Astronomy (Snell's Olmsted).

Second term: Mental Philosophy. Guizot's History of Civilization in Europe. Political Economy. Art. English Literature.

Third term: Moral Philosophy. Lieber on Civil Liberty. Evidences of Christianity, with Lectures.

Lessons in the English Bible, or Greek Testament, compositions, declamations and extemporaneous discussions weekly, throughout the course.

Option between two or more studies is allowed at various points in the course. During Junior Year, the student may select three of the four studies specified, but must complete each study begun.

Candidates for admission to the Freshman class who have pursued their preparatory studies elsewhere are examined in the following books and subjects, or their equivalents:

Latin Grammar, including Prosody. Cæsar, two books. Cicero, seven orations. Virgil, three Bucolics and six books of the Æneid. Arnold's Latin Prose Composition, to the Passive Voice. Smith's Smaller History of Greece, and of Rome. Greek Grammar, including Prosody. Xenophon, Anabasis, three books. Homer,* Iliad, two books. Higher Arithmetic, including the Metric System. Loomis's Algebra, through Quadratic Equations. Loomis's Geometry, four books. English Grammar and Geography.

All candidates for advanced standing in this and the following courses are examined, in addition to the preparatory studies, in those already pursued by the class which they propose to enter.

Scientific Course.

FRESHMAN YEAR.

First term: Algebra completed. Mediæval History. French Language. Free-hand Drawing.

Second term: Geometry completed. French. Modern History.

Third term: Trigonometry (Loomis). French. Botany (Gray).

SOPHOMORE YEAR.

First term: Analytical Geometry (Loomis). Botany (continued). Physical Geography.

Second term: Chemistry, with Lectures. Rhetoric. Mineralogy, or Calculus.

Third term: Chemistry. Surveying (Loomis). Constitutional History.

JUNIOR YEAR.

First term: German (Whitney's Grammar). Perspective. Logic. Anatomy and Physiology.

* In place of the Homer, the last six books of Virgil's Æneid or 2,000 lines of Ovid will be accepted.

Second term: Natural Philosophy—Mechanics and Hydrostatics (Snell's Olmsted). Zoölogy. German.

Third term: Natural Philosophy — Pneumatics and Optics. German. Geology.

SENIOR YEAR.

First term: English Literature. Astronomy (Snell's Olmsted). Mental Philosophy.

Second term: English Literature. Mental Philosophy. Guizot's History of Civilization in Europe. Political Economy. Art.

Third term: Evidences of Christianity, with Lectures. Moral Philosophy. Lieber on Civil Liberty.

The Latin or Greek of the College Course will be accepted in lieu of the Mathematics in the above course beyond the Freshman year.

Lessons in the Bible, compositions, declamations, and extemporaneous discussions, weekly through the course.

Candidates for admission to the Freshman class of this department must sustain a satisfactory examination in English Grammar and Analysis, Arithmetic, including the Metric System, Algebra through Quadratic Equations, four books of Loomis's Geometry, History of the United States, and Geography.

Ladies' Course.

FIRST YEAR.

First term: Cicero's Orations (Chase and Stuart). Algebra completed. Physical Geography.

Second term: Cicero's Orations. Latin Prose Composition. Geometry completed.

Third term: Cicero's Orations. Trigonometry (Loomis). Botany (Gray.)

SECOND YEAR.

First term: French Language. Botany continued, or Analytical Geometry, or History of Rome. Virgil's Æneid. Latin Prosody.

Second term: Chemistry, or Calculus, or Mineralogy. French. Virgil's Æneid.

Third term: French. Constitutional History, or Chemistry. Virgil's Æneid.

THIRD YEAR.

First term: German (Whitney's Grammar). Anatomy and Physiology. Logic.

Second term: German. Rhetoric. Zoölogy, or Modern History.

Third term: Natural Philosophy—Pneumatics and Optics. German. Geology.

FOURTH YEAR.

First term: English Literature. Mental Philosophy. Astronomy.

Second term: Mental Philosophy. Guizot's History of Civilization in Europe. Political Economy. Art. English Literature.

Third term: Moral Philosophy. Evidences of Christianity, with Lectures. Lieber on Civil Liberty.

For some of the above studies, students may, at the option of the Faculty, substitute Music or advanced studies in the other courses.

Lessons in the Bible and Exercises in English Composition, weekly, during the course.

Candidates for admission to the first year of this course are examined in English Grammar and Analysis, Higher Arithmetic, including the Metric System, Algebra through Quadratic Equations, four books of Loomis's Geometry, Latin Grammar, Latin Reader, Cæsar, History of the United States, and Geography.

Preparatory Department.

Classical Course.

JUNIOR YEAR.

First term: Latin Grammar continued through the Course. Latin Lessons. Arithmetic (Olney). English Grammar and Analysis. Elocution and Composition through the course.

Second term: Latin Lessons and Cæsar. Arithmetic. English Grammar and Analysis. Book-keeping.

Third term: Cæsar (Chase and Stuart). History of the United States. Civil Government.

MIDDLE YEAR.

First term: Cicero's Orations (Chase and Stuart). Greek Grammar continued through the course (Goodwin). Greek Lessons (White). History of Rome.

Second term: Cicero's Orations. Greek Lessons and Anabasis. History of Greece.

Third term: Cicero's Orations. Latin Prose Composition. Xenophon's Anabasis.

SENIOR YEAR.

First term: Virgil's Æneid. Latin Prosody. Algebra (Loomis). Greek Prose Composition. Xenophon's Anabasis.

Second term: Virgil's Æneid. Algebra through Quadratic Equations. Homer's Iliad. Xenophon's Anabasis.

Third term: Virgil's Æneid. Homer's Iliad. Geometry (Loomis).

The course of study and instruction defined above is designed thoroughly to prepare students for admission to the college department of this Institution, or to any other college in the country.

All candidates for advanced standing in this course are examined in the studies already pursued by the class they propose to enter.

Classes commencing the study of Latin are formed twice in each year—at the beginning of the Fall and Winter Terms.

Normal Department.

Elementary Course (Two Years).

FIRST YEAR.

First term: English Grammar. Arithmetic. Reading and Orthography. Algebra. Drawing and Vocal Music.

Second term: Algebra. English Grammar. Book-keeping. Geography and Penmanship.

Third term: United States History. Elementary Methods. Civil Government.

SECOND YEAR.

First term: Algebra. Mediæval History. Physiology.

Second term: Principles of Education and Methods. Zoölogy. Natural Philosophy.

Third term: Elements of Mental Philosophy and School Management. Geometry (Plane). Botany.

Full English Course (Three Years).

One year's study in addition to the requirements of the Elementary Course.

First term: English Literature. Mental Philosophy. Logic.

Second term: Geometry. Rhetoric. Chemistry.

Third term: Advanced Professional Instruction (Lectures). Geology. Moral Science.

Language Courses (Four Years).

FIRST YEAR.

First term: Latin. English Grammar. Arithmetic. Vocal Music and Drawing.

Second term: Latin. Arithmetic. English Grammar. Geography.

Third term: Latin. United States History. Civil Government.

The first year of the Modern Language Course will be identical with first year of the Elementary Course.

SECOND YEAR.

First term: Latin, or German. Greek, or Mediæval History. Algebra.

Second term: Latin, or German. Greek, or Algebra. Book-keeping.

Third term: Latin, or German. Greek. Vocal Music. Geometry.

THIRD YEAR.

First term: Latin, or Geometry. Greek, or French. English Literature.

Second term: Latin, or Rhetoric. Greek, or French. Natural Philosophy.

Third term: Latin, or Perspective Drawing. Greek, or French. Botany.

FOURTH YEAR.

First term: Latin, or Physiology. Greek, or Perspective Drawing. Mental Philosophy.

Second term: Political Economy. Chemistry. Moral Philosophy and Logic.

Third term: Evidences of Christianity. Essays on Educational Topics. Advanced Professional Instruction.

Lessons in the Bible, Composition, Declamations, and Discussions, weekly, throughout all the courses.

The professional instruction in Reading and Elocution, and the reviews in the common branches, will be conducted by the Principal of the Normal De-

partment. The advanced studies will be pursued under the instruction of the College Professors in their respective departments.

A class will be organized in the fall and spring terms for the benefit of those about to teach. It will last half the term.

Those who complete the Elementary Course will receive a certificate signed by the President of the College and the Principal of the Normal Department.

Those who complete any of the full courses will receive a normal diploma.

Art Department.

A course of study in art has been arranged, the object of which is to cultivate a taste for the beautiful by affording the pupil lectures upon its theories and principles, by teaching him to study form and color in nature, and by making him acquainted with objects of art. The lectures are given by Col. James Fairman, the distinguished painter, who gave to the college, three years ago, one of the finest of his pictures. The course in art is completed in connection with a four years' course in the college, but, if made a specialty, it can be completed in two years. The art room is furnished with easels, casts, patterns and all necessary materials. The best methods in instruction are followed.

The Michigan Conservatory of Music.

This institution affords students rare facilities for instruction in music. It maintains a high standard of excellence. It offers a course of instruction which extends through four years. That course is comprehensive and thorough, and is arranged with a view to maintain a high standard of musical taste. The aim of the management is to secure a complete mastery of all the branches that are undertaken by the student, rather than to give a superficial knowledge of a few pieces. A real education of the musical faculties is sought rather than an illustrative training in styles which are to be blindly imitated by the pupil. Broad and thorough culture is the result of such an education. Instruction is given in playing the piano, organ, cabinet organ, and orchestral instruments; in vocal culture, in glee, chorus, and solo singing, and in all branches of the theory of music.

Degrees and Diplomas.

The degree of bachelor of arts is conferred upon the graduates from the classical course, and that of bachelor of science upon the graduates from the scientific course.

The degrees of master of arts and of master of science are conferred upon bachelors of three or more years' standing who have been engaged in literary or scientific pursuits, and have sustained a good moral character.

Diplomas certifying the successful completion of the prescribed course of study are given to the graduates from the ladies' course, and certificates or diplomas to the graduates from the normal department. Diplomas are awarded those who complete the four years' course in music.

Library and Reading-Room.

The college library contains nearly 10,000 books and about 5,000 pamphlets. It is classified and arranged according to the Amherst system. Each student is allowed to take two books, and to retain them for two weeks.

In connection with the library is a reading-room, well supplied with the leading journals of news, politics, religion, science, literature, and art.

The Palmer Museum.

The Palmer Museum of Paleontology contains the valuable collection known as the "Ward Series of Casts of Fossils," which, for educational purposes, are equal in value to the originals. These, together with the large collection of fossils, minerals, and typical rocks, belonging to the Brown Cabinet, illustrate, in a very full and satisfactory manner, the sciences of geology, paleontology, and mineralogy.

The Brown Cabinet.

The cabinet embraces more than 50,000 specimens. The fossils are numerous and valuable. The collection of minerals is rich and full, constituting three-fifths of all found on Prof. Dana's list. The shells are most nearly complete scientifically. Prof. Martin, of the university of New York, says of them that they illustrate the conchology of the globe.

Religious Culture.

All students are required to attend weekly exercises for the study of the Bible. These exercises generally accompany the Sunday school at the college church.

All students are required to attend devotional exercises daily in the college chapel, and public religious worship twice on Sunday. Unless special request is made to the contrary by parents or guardians, all students are required to attend public worship in the college church.

The students also sustain two organizations for religious and philanthropic work, entitled the Young Men's and the Young Women's Christian Associations. They maintain weekly religious meetings, and conduct Sunday schools in the neighborhood of the college.

Expenses.

Tuition in the College per term	$7 00
Tuition in the preparatory department, classical, per term	7 00
Tuition in the preparatory department, English, per term	5 00
Incidentals, per term	3 00
Room rent a year in Parsons Hall	$7 50 to 11 00
Table board a week in Shipherd Hall	2 50
Board and room a week in Shipherd Hall	$3 25 to 4 00

Expenses in Music.

Piano, Organ, and Singing.

Classes of two pupils, twenty-two lessons a term, each pupil	$12 00
Classes of three pupils, twenty-two lessons a term, each pupil	10 00
Private instruction, twenty-two lessons, a term	18 00
Private instruction, eleven lessons, a term	10 00

Theory of Music, Notation, Harmony, Etc.

In classes, twenty-two lessons, a term	$5 00
Use of piano one hour a day, a term	3 00
Use of cabinet organ for one hour a day, a term	2 50
Use of pipe organ for one hour a day, a term	3 00

Aid to Indigent Students.

Deserving young men who are preparing for the ministry may have their tuition remitted.

Such young men in the Collegiate Classical Course can ordinarily receive $25 a term from The American College and Education Society.

Students under the care of the Presbytery receive aid from the Board of Education of the Presbyterian Church.

Tuition is remitted to the daughters of home and foreign missionaries. The income of the Carter Fund is bestowed upon worthy young ladies who need assistance.

No worthy student is allowed to leave College for lack of means.

In most respects, the academical year which this report covers was one of the best in the history of this Institution. One year excepted, the number of students was greater than ever before. Good order prevailed among the students, and excellent work was done by professors and teachers. The one misfortune of the year was the destruction of Shiphard Hall by fire, on the morning of April 11. The Trustees at once set themselves to the task of rebuilding, and the work was pushed so vigorously that the new hall is now finished and ready to be furnished. A fine dining hall is attached to it. The cost of both halls is $30,000.

Respectfully submitted,
HORATIO Q. BUTTERFIELD,
President.

A.

REPORT OF THE VISITORS.

Hon. Varnum B. Cochran,
Superintendent of Public Instruction:

Sir,—The committee appointed to visit Olivet College respectfully report that they find the standard of scholarship in the various branches of study pursued very good and well sustained. The teachers are competent and thorough in their work. Rhetorical studies are fully appreciated in this institution, as shown by the excellent character and rendering of the essays and orations of the graduating class. The attention given to music also, both vocal and instrumental, is very commendable. The location and quiet surroundings of this institution are not only inviting to study but serve as a safeguard to good moral habits.

Olivet College, while undenominational in its character, aims closely to entwine religious culture with a liberal education in the arts and sciences.

The accession of Professor Estabrook, with his normal department, has added very materially to the number of students and to the usefulness of the college.

Very respectfully,
THOS. WRIGHT,
J. H. CHANDLER,
Visitors.

MICHIGAN FEMALE SEMINARY.

REPORT OF THE VISITORS.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—It is with pleasure that we, the undersigned, members of the committee of State visitors to the Michigan Female Seminary, make the following brief report:

This seminary, which ranks among the oldest schools of learning in our State, is eminently fortunate in being under the care and management of two able women who seem to understand what *education* means. We were gratified in seeing the self-reliance of the students as shown in the class room. When called upon, each *stood and answered in a definite way the questions asked.* In the halls, in the parlors, at the doors of the private apartments, the pleasant, courteous greeting given the stranger visitor showed that more was being learned than text-books give. The questions asked by the students themselves, suggested by the subject of the lesson, gave evidence of *working minds*, and not the merely receptive ones, and barely that, that are too often found in our schools. In a word, the general intelligence of the school was much greater than is found in the average school. We visited a number of the classes and found everywhere earnest teachers and, for the most part, earnest pupils, teachers who had evidently prepared themselves to make the most of the hour before them, and pupils who were able to give the result of their study and gain more from the recitation. We were especially pleased with the classes in English literature and general history, conducted by the scholarly associate principal. There was also a class in arithmetic which we remember with satisfaction, particularly so, because special attention was skillfully given to one or two backward students who needed the right kind of help and encouragement.

The neatness and order of the home department, as seen in the young ladies' private rooms, at the dining-tables, and in the kitchen are no slight recommendation to the school.

We can heartily commend, in every particular, the work of the school as it relates to the training of these young women. The only lack observable in the school was that which money alone can supply. The large reception rooms, which might be made very attractive, were uninviting, as were the library and the halls. The bright, cheery chapel was an exception to the other rooms in the building, and we could but wish, for the sake of those who live day after day in those rooms and halls, that by another year we might learn that some

one had seen their needs and supplied them. We believe that much is gained in living every day in an atmosphere that from itself imparts refinement, and so we may be pardoned in these suggestions for giving expression to that which was forced upon us by what we saw.

We feel that we are speaking with moderation when we say that the Michigan Female Seminary offers the most excellent means for any young woman to gain that which will make her an intelligent, thoughtful student, with a knowledge of the amenities of life, thus preparing her for usefulness in whatever she may be called upon to do.

Respectfully submitted,

EMMA M. FARRAND,
MARY M. GOLD,
Visitors.

MICHIGAN MILITARY ACADEMY.

REPORT OF THE SUPERINTENDENT.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—I have the honor to present the following as the report of this institution for the year ending June 19, 1882:

BOARD OF TRUSTEES.

Hon. A. C. Baldwin, President; Col. Sylvester Larned, Vice President; Hon. J. D. Norton, Treasurer; Col. Henry M. Duffield; Hon. Chas. H. Palmer; Col. J. Sumner Rogers, Secretary.

ACADEMIC STAFF.

Superintendent.—Col. J. Sumner Rogers.
Assistant Superintendent.—Rev. E. A. Berry, History and English and American Literature.
Principal.—I. M. Wellington, M. A., Mathematics and English Language.
W. H. Butts, M. A., College Mathematics and Greek.
F. E. Clark, B. A., Natural and Intellectual Sciences.
T. B. Bronson, B. A., Latin and Modern Languages.
Lieutenant C. B. Satterlee, 3d Artillery, U. S. A., Military Science and Tactics.

COURSES OF STUDY.

The Academy offers five courses of study, each requiring four years for completion:
1. Academic. 2. Classical. 3. Latin Scientific. 4. Scientific. 5. English Commercial.

Academic Course.

First Year.—English Grammar, General History, Elementry Algebra, Arithmetic (Rev.), Spelling, Book-keeping.
Second Year.—English Composition, Rhetoric, Physiology, Botany, Advanced Algebra, Plain Geometry.
Third Year.—English History, English and American Literature, Solid Geometry, Trigonometry and Surveying, Chemistry, Physical Geography, Zoölogy, Geology or Mineralogy.
Fourth Year.—Natural Philosophy, Political Economy, Principles of Law, Essays, Orations, German, Latin, or French.

Classical.

First Year.—1st Semester: Latin Lessons, U. S. History, English Composition. 2d Semester, Latin Lessons, General History, Rhetoric.

Second Year.—1st Semester: Cæsar, Physical Geography, Elementary Algebra. 2d Semester: Cæsar and Cicero, Roman History and Ancient Geography, Review Arithmetic.

Third Year.—1st Semester: Cicero and Prose, Greek Lessons, Advanced Algebra. 2d Semester: Cicero and Ovid, Greek Lessons, Plane Geometry.

Fourth Year.—1st Semester: Virgil, Anabasis, and Grecian History, Solid Geometry, Essays. 2d Semester: Virgil, Anabasis, and Prose, Trigonometry, and Review Mathematics, and Orations.

Latin Scientific.

Students preparing for the Latin Scientific (B. L.) Course in College will pursue the Classical Preparatory Course, substituting two years of French or of German for Greek and Grecian History.

Scientific.

Students preparing for the Scientific (B. S.) Course in College omit from the Academy Course English History, English and American Literature, Physical Geography, Zoology, Political Economy, and Principles of Law, and spend two full years in each of two languages, French and German, French and Latin, or German and Latin.

English Commercial.

Students prepare for the English Commercial (B. L.) Course in College by pursuing the studies of the first three years of the Academy Course, substituting Natural Philosophy for the other Sciences during the third year, and adding essays and orations. Extra work in English and American Literature is required.

CONCLUSION.

In reviewing the work of the past year we have every reason for encouragement. The many flattering testimonials received from the patrons of the Institution, as to the quality of the work done in its several departments, give us new courage, and will stimulate to renewed energy in making the Academy fully adequate in every detail necessary for thorough education.

The continual increase in attendance makes it necessary for us to enlarge our present quarters, and the Trustees have decided to erect immediately a new and substantial building which will give us additional accommodation for one hundred and twenty pupils. This building will be completed by the 1st of September, 1883.

Very respectfully, your obedient servant,

J. SUMNER ROGERS,

Superintendent.

A.

REPORT OF THE VISITORS.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—Your committee, appointed by your favor under the provisions of State law, as visitors of the Michigan Military Academy at Orchard Lake, having performed that agreeable duty, in company with Governor-elect Begole and the trustees of this institution, beg leave to submit the following report:

We find the institution to be peculiar in its character, being neither individual, corporate, nor State. It is managed by a board of trustees who are gentlemen of culture and wealth, alive to the general interests of education and proud of the institution which a portion at least of this same board has created and reared to its present position. The future of this effort will, in the judgment of your committee, depend largely upon a change in the form of its proprietorship. The State of Michigan wisely frames laws for institutions of this character which shall perpetuate their usefulness long after their founders bid adieu to their nobly chosen calling. The graduates and under-graduates of such an institution must necessarily exercise a manly influence upon the youth of the entire State, which will increase in proportion to the facilities afforded for a larger enrollment. Thus organized *in perpetuo*, the State could, in the interest of popular enlightenment and national defense, be called upon for aid, while individuals of wealth would seek this channel for the exercise of private beneficence. If there are ways in which the State can aid this institution it will be aid well bestowed.

The examination of the merits of this school of learning may best be considered: first, by the points of resemblance to other schools and a comparison of the work done by teacher and taught; second, by the divergence in system-

COURSES OF STUDY, AND SCHOLARSHIP.

When it is considered that only five years have elapsed since the commencement of this, at that time, experiment, the progress made in the instruction and in establishing a curriculum of studies of a high order of merit, is certainly encouraging. The chairman of your committee, in 1881 a member of the board appointed by the Governor, examined closely the work at that time done in class-room, and it is with pleasure we notice desirable changes and decided improvements.

The whole effort of the superintendent and management seems to be to secure the best talent attainable as instructors, thus assuring a mastery of the studies on the part of the pupil.

English Language, Rhetoric, and Composition.

The exercises in English language, rhetoric, and composition were practical. Using the class-book only as a guide, the scholar is taught that he must reach out into new avenues of thought, must develop the germ that is a part of his nature by originating expressions and forming sentences not found in books. The object in this department seems to be the cultivation of independence of thought.

Latin and Modern Languages.

The last quarter of a century has so modified the mode of teaching, as well

as the matter taught in this department, that even among those who have never had the advantages of classical culture the benefits arising therefrom are manifest. These studies are here pursued by the natural or conversational method and the scientific, which is the method usually employed in schools and colleges. Your committee are of opinion that the union of methods will, for the general student, insure a success at once disciplinary and practical. Without the student understands the principles which govern language and has an acquaintance with the vocabulary, he can make no proficiency in the use of words or correct formation of the language.

Natural Sciences.

All knowledge acquired in schools is at best but fragmentary. The student who suspects he has acquired a mastery of any subject has yet to learn the most important lesson of life, viz., that the most one learns is how to study, where to look, and how to solve any given problem. We were pleased to note that in the department of natural science the student was not confined to the text-book, but took practical problems to solve on subjects analogous to those treated, and that frequent use was made of experiments and blackboard exercises to illustrate the lesson. No better method can be pursued.

Mathematics.

The department of Mathematics is under the charge of a graduate of the University, who avails himself of all the latest aids to a correct understanding of this most difficult, most exact science. The effort is to insure accuracy and rapidity, so important to a man of business, while they lay the foundations for advanced work in pure and applied mathematics.

General Observations.

Your committee made as thorough an examination as time would permit of recitations in all classes, and cheerfully give our testimony to the zeal and fidelity of all the professors to the various subjects assigned them, and to the general good effects on the student. The successful student is admitted to the State University without farther examination.

Thus far we have noted only the plans of study harmonizing with other schools of learning, and in this examination we find much to commend, and think a comparison would place the Michigan Military Academy in the front rank on pure scholarship.

But the name of the institution, the dress of the boys, the martial appearance of the grounds indicate that there is something here that is not found elsewhere in Michigan. Are there any superior advantages in a military school? Wherein are our boys better off here than at any purely literary institution? The student here, by force of location—away from the throng of city life, is removed from temptation, and the boy, accustomed to life on the busy street, is at first likely to miss amusements and to think time will hang heavily, but after a few weeks he finds every hour is occupied from "reveille" to "taps." Conversation with the boys from all sections of the country convinced your committee that the boys grow to like the system; they have no time except to perfect a healthy mind in a sound body. With scarcely an exception they increase in weight, they are rarely sick, and during the entire year, we are informed, the loss in membership from all causes is not two per cent of the

enrollment. Good boys here become still better. Bad boys cannot remain without becoming better. The boy who exercises an evil influence on his fellows is invited to lend the institution his absence.

This institution, recognized as we have seen in its literary department by the favor of the State University, is in its military instruction recognized by the U. S. Government in detailing a scholarly graduate of West Point as instructor. His gentlemanly bearing and elegant manners exercise a manly influence upon the entire school. Even the other professors who have never before been accustomed to drill and soldierly bearing from contact appear more erect than in schools which have not this system.

The books we read, the men we associate with, leave an indelible impress upon the mind, and will help shape the whole after-life. The *esprit de corps* of a military school thus stamps all who come under its influence that they show it through life, no matter what their calling.

We therefore commend this school where it departs in methods from other schools of learning. We are of opinion that drill, precision, government, system, self-reliance, through personal control, and the control of officers selected among students by themselves, if introduced in the State University and other schools of a high character throughout the State, would be found of very great and lasting benefit.

The moral instruction of the students is prominent, and without exception the teachers and officers are patterns of sobriety. The teacher can always enforce a lesson in good morals if precept is followed by example.

We, therefore, generally commend this Academy, not in fulsome flattery, but as a young institution which has much promise for the future if the present system and management are continued and strengthened.

All of which is respectfully submitted,

DELOS PHILLIPS,
GILBERT R. OSMUN,
NATHAN CHURCH,
Visitors.

MONROE YOUNG LADIES' SEMINARY.

REPORT OF THE PRINCIPAL.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—I have the honor of submitting to you the following of the work and condition of Monroe Young Ladies' Seminary, for the year ending June 30, 1882:

I came here as principal, Sept. 15, 1881, expecting to find a school ready to my hand, and the buildings and premises in good condition. I was greatly disappointed in these respects. During the months of October and November repairs were made to the amount of $1,500, and since then much has been done to place buildings and premises in excellent condition, and the institution is now being placed before the public in its improved state, and there seems much cause to hope that it may soon regain its former prestige and popularity. A new board of trustees was elected July 17, 1882, consisting of the following gentlemen: Rev. C. N. Mattoon, D. D., Pres., Hon. J. P. Hogarth, C. T. Southworth, M. D., J. R. Ranch, Esq., A. I. Sawyer, M. D., Hon. James Armitage, Hon. Edwin Willits, M. C., Hon. J. M. Sterling, Frank S. Sill, Esq., Hon. Fred. Walldorf, Gen. Geo. Spaulding, Hon. Harry A. Conant, Hon. Gouv. Morris, Prof. C. C. Wetsell. A new and thorough curriculum has been adopted, suited to the demands of the times, which is published in full in our circular for the current year.

The board of visitors have not visited the school during the past year, but we hope they may do so this year. There are at present five thoroughly qualified teachers in the faculty, and the number will be increased as more are needed for the work of instruction.

Very respectfully,
C. C. WETSELL, *Principal.*

RAISIN VALLEY SEMINARY.

REPORT OF A VISITOR.

HON. VARNUM B. COCHRAN,
Superintendent of Public Instruction:

SIR,—The undersigned, a visitor, by your appointment, to Raisin Valley Seminary, respectfully submits the following report:

I found the seminary pleasantly located four miles northeast of Adrian, and enjoying the advantages of a pleasant rural situation. The aim of the seminary is to afford, to that large class of students who are unable to enjoy the advantages of higher institutions, the benefit of thorough training in the branches that are of the greatest utility in life, and that also form the groundwork on which a higher education rests. There are two full courses of study in the H. S. Department, the English and Latin, both extending through four years. The course in mathematics extends from arithmetic to trigonometry. In natural science the effort is made to familiarize the student with those experiments from which the most important deductions result. The institution is indebted to the generosity of the late Moses Sutton for an astronomical observatory, furnished with a telescope of 6 inches aperture, made by the celebrated opticians, A. Clark & Sons, Cambridge, Mass. We were greatly pleased with the manner in which a Latin recitation was conducted by the Assistant Principal, Miss M. A. Brown. The recitation and answers to our questions convinced us that very thorough work had been done in this branch of the languages. The number of students in the seminary at the present time is only 38. Much of their patronage coming from the surrounding country, the attendance during the winter term is much larger—nearly a hundred. The present Principal, W. W. White, B. S., is a genial, courteous gentleman, whose connection with the institution will undoubtedly be very beneficial, both in increasing the number of students and in raising the standard of scholarship.

J. W. ROBINSON,
Visitor.

SOMERVILLE SCHOOL.

REPORT OF THE VISITORS.

HON. VARNUM B. COCHRAN,

Superintendent of Public Instruction:

SIR,—Two members of the committee appointed to visit the Somerville school for young ladies performed that duty in May, 1882. Their visit was not timed for any occasion of special examination or exhibition, and the recitations they attended were the regular daily exercises. While the school is under the disadvantage unavoidable in a new institution of being imperfectly graded, evidences of thorough work by pupils in all grades of advancement were everywhere noticeable.

The aim of the teachers has evidently been not to insist upon the committing to memory a certain number of pages from the text-books, but using them as *guides*, to develop in their pupils individuality of thought and expression.

The recitation in physical geography was a gratifying example of the charm that may be given to what, under a stereotyped, conventional method of teaching, would be a dry study.

In the department of art unusual advantages were offered, and proof of satisfactory progress is given by the work of the pupils in the various branches of this department.

The committee noticed with special approval the attention given to out-door exercise and physical culture, regular gymnastic drill forming part of the daily duties.

Perhaps nothing is more noticeable, among many things to be commended in this school, than the air of refinement and the home-like quiet that everywhere pervade it. There is earnestness and enthusiasm for *work* in both teachers and pupils, but there is also a constant education in those graces of speech and manner that mark the woman of refinement, and for whose absence not even superior mental acquirements can atone.

Very respectfully,

ELIZA C. SMITH,
OLIVIA S. LATIMER,
Visitors.

DECISIONS

OF THE

SUPREME COURT OF MICHIGAN

ON MATTERS OF

EDUCATIONAL INTEREST.

FILED DURING 1882.

DECISIONS OF THE SUPREME COURT.

I.

Appointment of School Teacher.

Cassius M. Hazen *v.* Heinrich Lerche. Mandamus. Submitted Jan. 24; denied Jan. 25, 1882.

Per Curiam. The relator claims to be a school teacher, regularly employed in a school district in one of the townships of Tuscola county. The defendant is assessor of the district. The relator holds an order for one month's salary, which the respondent refuses to pay, and a writ is asked to compel payment. For cause against the writ the fact is shown that the relator was hired by two members of the school board, without calling any meeting of the board, and without consultation with the respondent or his knowledge.

Held, that the cause shown was conclusive; the statute expressly requiring the convening of the board for the transaction of their official business. Laws of 1881, p. 171, § 6; p. 173, § 13.

II.

Removal of School District Moderator.

Flora B. Hazen *v.* Township Board of Akron. Certiorari to township board. Submitted April 12; proceedings quashed April 19, 1882.

Marston, Justice:

The statute relating to primary schools gives to the township board power to remove from office, upon satisfactory proof, any district officer who shall have illegally used or disposed of any of the public moneys entrusted to his charge, or who shall persistently and without sufficient cause, refuse or neglect to discharge any of the duties of his office. Act No. 164, Laws of 1881, chapter 13, §8.

Mrs. Hazen was holding and exercising the duties of the office of moderator, and the board undertook to remove her upon a written complaint, charging: first, that she was not duly elected; and, secondly, that she was guilty of a gross violation of duty in hiring her husband to teach the school and in agreeing to pay him more wages than was requisite to have obtained a good or better teacher.

It is sufficient to say, that the statute does not authorize a removal on any such charges, and even if it did, the evidence introduced did not tend to support the charges made.

The proceedings, therefore, must be quashed with costs.

(The other Justices concurred.)

III.

Authority of Director to Purchase School Furniture.

John McLaren *v.* Township Board of Akron. Certiorari to township board. Submitted April 12; proceedings quashed April 19, 1882.

Marston, Justice:

This case was heard with the preceding case of Mrs. Hazen against the township board, as both cases arose under the same statute. The charge in this case was: first, for having expended the money of the district contrary to law, and without the vote of the district, in the purchase of furniture or apparatus for the school-house; and, secondly, for conspiring with Mrs. Hazen in the hiring of her husband as a teacher.

McLaren was director, and it appears that at the annual meeting it was moved and carried, "to fit up the school-house for the winter term," and in pursuance of this authority some twelve dollars was expended in the purchase of new seats, and there seems to have been a difference of opinion as to the necessity of such a purchase being made.

Under the authority given, the director, in the exercise of a sound discretion, could make the purchase. Township of Hamtramck v. Holihan, 46 Mich., 127.

The other question is disposed of in the Hazen case *supra*. The proceedings must be quashed and held for naught with costs.

(The other Justices concurred.)

IV.

Appeals from Board of Inspectors to Township Board in Certain Cases.

The People *ex rel.* of Samuel Cannon, Assessor of School District No. 5 of Pine Township *v.* Joseph Wilcox, Supervisor of Pine Township.

Graves, Chief Justice:

This is a hearing on an order to show cause why a *mandamus* should not issue.

The case set up by the relator in his application is briefly to the effect that the school inspectors in 1879 organized school district No. 5, and in so doing detached a part of the territory of school district No. 1 to make up the requisite territory for the new district; that said district No. 1 owned a valuable school building and some other property, a share of the value whereof was due to the new district from the old one; that the inspectors accordingly settled the amount at $445, and all needful steps were taken to fix the respondent with the duty to lay a tax on the district for the sum ascertained by the inspectors, but he positively refused. The case is submitted on the application

and the answer of the respondent, accompanied by an affidavit made by the township clerk who officiated with the inspectors when they assumed to find what amount it was incumbent on the old district to pay to the new one; and on another paper subscribed by relator's attorneys and called a replication, wherein, among other things, it is said that relator demands a trial of the matter set forth in said petition and answer.

The record is singular. The parties seem to be at variance in respect to certain facts, and at the same time in a state of expectation that something decisive may be done before they are settled, and on a scrutiny of the record there appears to be a point of law which may be safely adjudicated on this hearing, and the result of which will put an end to this proceeding.

The respondent's answer is understood as admitting the determination by the inspectors that the share to be paid by the old district to the new one on account of school building and district property was $445. At the same time the answer sets up that the property in question was not owned by the district, but by private persons, and that the inspectors acted without information on this subject and on mere assumption, and this statement is supported by the affidavit of the township clerk, who acted with the inspectors and as one of the board. The answer further shows that an appeal to the township board was taken from the finding of the inspectors of the amount payable from the old district to the new one, and that the appeal was entertained and the decision of the inspectors reversed.

The relator is understood as admitting that the proceedings for appeal were pursued and in proper form, and that the township board assumed jurisdiction and ordered a reversal. But his point of contention is that the statute gives no authority for an appeal in such a case, and that the taking cognizance of the subject was mere usurpation.

The claim is set up that a decision by the inspectors liquidating the sum to be paid by one district to another in such circumstances is final and conclusive, and hence that the reversal by the township board is void, and the determination by the inspectors binding and of imperative force.

It is not to be assumed that school inspectors have any jurisdiction to attempt a liquidation where the ownership of a school-house or other property is the subject of *bona fide* controversy. There is much room for thinking that they have not received power to judge any question so difficult and imposing as the ownership of school district property, nor power to go on and, without regard to the actuality of such ownership, fix a district with liability. And it may be that the provision for the inspectors to find the amount to be paid by a district tacitly carries with it the condition precedent that the ownership is conceded or has been settled by a competent tribunal. The question is not material now.

The relator bases his denial of power in the township board to hold appellate jurisdiction on the peculiar language of the statute. The only provisions it is necessary to notice are sections 3644 and 3734, compiled laws of 1871, and they appear below.* The argument is that an appeal is given only against

* (3644.) SEC. 75. When a new district is formed, in whole or in part, from one or more districts possessed of a school-house, or entitled to other property, the inspectors, at the time of forming such new district, or as soon thereafter as may be, shall ascertain and determine the amount justly due to such new district from any district out of which it may have been in whole or in part formed, as the proportion of such new district of the value of the school-house and other property belonging to the former district, at the time of such division; and whenever, by the division of any district, the school-house or site thereof shall no longer be conveniently located for school purposes, and shall not be desired for use by the new district in which it may be situated, the school inspectors of the township in which such school-house and site shall be located, may advertise and sell the same, and apportion the proceeds of such sale, and also any moneys belonging to the district thus divided, among the several districts erected in whole or in part from the divided district.

(3734.) SECTION 1. *The People of the State of Michigan enact*, That whenever any five or more tax-

some "action, order, or decision of the board of school inspectors *with reference to the formation, division,* or *consolidation* of" a "school district;" and that the finding, made by the school inspectors on this occasion, that $445 was due from the old district was not "any action, order, or decision, *with reference* to the *formation, division, or consolidation*" of a district.

This view is quite too refined. The statute contemplates the adjustment of the amount as connected with the alteration of territory and as proper to be made at the same time. The equitable partition of the interests in the corporate property is a sequel of the division of the corporate territory, and the former is fairly an action having relation or "*reference*" to the latter.

It would not be easy to find a reason for the allowance of an appeal in one case and not in the other; neither would it be easy to discover what purpose the Legislature could have had in using the circuitous description of the cases of appeal, unless it was the object to extend the right not only to the *formation, division,* and *consolidation* of districts, but also to such proceedings incidental thereto as the act in question.

The township board had jurisdiction of the subject, and as we view the case this conclusion disposes of the present application adversely to the relator.

The petition is therefore denied, with costs against the relator.

[COOLEY and CAMPBELL, Justices, concurred.]

V.

REGULARITY OF PROCEEDINGS TO REMOVE A DISTRICT OFFICER.

Joseph Wenzel *v.* The Township Board of the Township of Dorr. Submitted June 20; decided June 27, 1882.

GRAVES, Chief Justice:

Proceedings were taken by the township board to remove the plaintiff from the office of director of a school district, under § 8 of Ch. 13 of Act No. 164 of the Laws of 1881.

The board adjudged his removal, and he obtained a review on *certiorari* in the circuit court, where the order of the board was affirmed.

The plaintiff sued out a writ of error.

The charges against him were originally lodged with the township clerk, and the members of the board thereupon united in a notice of the time and place for a hearing of the case. They did not meet together to issue the notice, but acted separately. On the arrival of the time they convened at the place designated, and proceeded as a board.

The parties appeared, and the plaintiff, being apprised that no session had been held to prescribe the notice, objected to further proceedings. The board recognized the notice as a good one and over-ruled the objection.

---

paying electors, having taxable property within any school district, shall feel themselves aggrieved by any action, order, or decision of the board of school inspectors, with reference to the formation or any division or consolidation of said school district, they may, at any time within sixty days from the time of such action on the part of said school inspectors, appeal from such action, order, or decision of said board of school inspectors, to the township board or boards of the township in which such school district is situated; and in case of fractional school districts, such appeal shall be made to the several township boards of the several townships in which the different parts of said fractional school district are situated, who shall have power, and whose duty it shall be, to entertain such appeal, and review, confirm, set aside, or amend the action, order, or decision of the board of school inspectors thus appealed from; or, if in their opinion, the appeal is frivolous, or without sufficient cause, they may summarily dismiss the same.

The sufficiency of the charges on their face was not questioned, and there can be no doubt that the board might have been compelled to act upon them. In regard to that they had no discretion. When the plaintiff's objection was over-ruled he pleaded not guilty, and demanded that proof thereon be given against him.

The sole question for decision is, whether the getting up of the notice without the coming together of the members of the board was a fatal defect; and we think it was not.

The method, at this stage, was more a matter of form than of substance, and as the charges were apparently sufficient, and the board actually came together on them at the fixed time and place, and virtually approved the previous proceedings, and the plaintiff was present and had a full hearing, there is no real ground for complaint.

The case is within the principle of Gager *v.* The Chippewa Supervisors, 47 Mich., 167.

The judgment is affirmed with costs.

(The other Justices concurred.)

VI.

Condemnation of School-house Site.

School District No. 5 of Delhi Township *v.* The Circuit Judge for Ingham County. Mandamus. Submitted October 12; decided October 31, 1882.

Graves, Chief Justice:

The relator prosecuted proceedings before a circuit court commissioner to condemn the land of one Everett for a school-house site, and the jury summoned to make the inquiry certified that the using of such real estate for the purpose of a school-house site for the district was a necessity and a necessary public use, and that they had ascertained and determined that the just compensation to be made by the district was sixty dollars.

The proceedings were filed in the circuit court, and the district moved that judgment be entered against it for the sum specified in the certificate of the jury. Chapter VIII. of Pub. Acts No. 164 of the Laws of 1881. The land owner, Everett, opposed it, and contended that in several important particulars the proceedings had been erroneous, and the circuit judge, upon a full hearing and investigation, found that the proceedings had been irregular and that the judgment asked for and the proceedings provided to flow from it ought not to be allowed, and he ruled against rendering the judgment. Thereupon the relator prayed a mandamus requiring the circuit judge to enter said judgment and take such further action as would enable the district to appropriate the land in question. An order to show cause was entered, and the circuit judge, in answer, sets up, in the first place, that his action herein is not controllable by mandamus, and, in the second place, that there was such want of regularity, which he specifies, as to preclude him from allowing a judgment to be entered without a violation of that statute. § 7 of said chapter VIII.

We are satisfied that having refused to allow judgment on his finding of the existence of such irregularities as forbade it, it is not proper to intervene by mandamus to compel a revocation of his ruling and the entry of a judgment. This court has not been commissioned to render judgment against a district

for the sum certified by a jury in these cases, and cannot do it. Yet were it to compel the circuit court, by mandamus, to overrule its finding against giving judgment and to render a judgment as suggested, it would be a virtual giving of judgment by this tribunal and of course an excess of authority.

I think the writ should be denied with costs.

(The other Justices concurred.)

VII.

Re-Formation of School Districts.

John Parman *v.* Boards of School Inspectors.

Certiorari to the township boards of school inspectors of the townships of Henrietta and Waterloo, in Jackson county, and Bunkerhill and Stockbridge, in Ingham county, to bring up the proceedings had before them in the formation of a fractional school district from the townships of Henrietta, Bunkerhill, and Stockbridge. The affidavit for the writ sets forth, as jurisdictional irregularities, the fact that (1), as no land was taken from the township of Waterloo the participation of the township board of that township invalidated the joint action taken; (2), that no meeting was held by the joint boards to give notice of contemplated alterations in the boundaries of the districts concerned; (3), that no proof of notice was made to the joint meeting; (4), that the notice actually given covered land not included in the district and omitted from the proceedings of the meeting; (5), that the joint boards did not designate which township clerk should deliver notice of the formation of the new district to the taxable inhabitants; (6), that the notices of the joint meeting did not state from what districts territory was to be taken for the new district, nor that it was authorized by the action of the several boards; and (7), that the record did not show that it was lawfully organized by the selection of a presiding officer and clerk. Submitted June 23; decided June 27, 1882.

Graves, Chief Justice:

This writ of *certiorari* was issued March 25th, and no attempt seems to have been made to serve it until the 17th of April, and then no copy of the papers on which it was allowed was served with it. The respondents were not bound to take any notice of it. At that time the organization of the district had become complete; a tax had been voted to build a school-house and a contract made for its construction, and during some of the most important of these proceedings the writ, although issued, was allowed to slumber and no good reason appears for the delay. In the interval important interests arose which could only be overturned at the expense of much public inconvenience and injury, and more or less individual damage. The serious defect in the service of the writ has been mentioned, and in coming here to oppose the proceeding the respondents qualify their appearance by protesting the insufficiency of the service and their right to insist that the writ be not allowed to operate to the district's prejudice. These considerations have weight, and when we add that the objections against the proceedings do not appear to the Court as jurisdictional, but seem to fall under the head of irregularities, so far as they have any merit, we are of opinion that the plaintiff in *certiorari* ought not to prevail.

We shall therefore dismiss the writ with costs.

(The other Justices concurred.)

PROCEEDINGS

AT THE

SECOND ANNUAL MEETING

OF

COUNTY SCHOOL EXAMINERS.

HELD AT LANSING, DEC. 27, 1882.

PROCEEDINGS AT THE MEETING OF COUNTY SCHOOL EXAMINERS.

Lansing, Wednesday, December 27, 1882.

MORNING SESSION.

In response to an invitation of the Superintendent of Public Instruction, to the members of the boards of County School Examiners of the several counties of the State, to meet in convention, a large number of these officers, together with other educationists of the State, met at Representative Hall and were called to order at 9 o'clock A. M., by Superintendent Varnum B. Cochran.

After some remarks by Superintendent Cochran, explanatory of the purposes of the meeting, in reviewal of the operations of the new law, and relative to the outlook of the future, the following paper was presented by Ephraim Marble, Secretary of the Board of Examiners of Calhoun county:

CERTIFICATES: THEIR GRADES AND REQUIREMENTS.

Previous to 1827 no schools authorized by law were taught in Michigan. In that year a law was enacted threatening with fine any organized township that did not maintain a school to be in charge of and taught by a person of good moral character and qualified to teach reading and writing. No higher qualification was deemed necessary at the time, as those old enough to attend school were considered of sufficient age to labor, and had little if any more than time to devote to the branches just named.

As years passed, and the earlier settlers had more time to give to education, additional studies were made a part of the required qualification of the teacher, such as orthography, arithmetic, and even geography and grammar, in some cases, were thought to be a necessary part of the qualification.

Besides these studies, the teacher was held to nothing more than to be able to instruct in the branches named until 1867, a period of forty years, when the examiner was allowed by law to fix upon a higher standard and to issue to teachers such grades of certificates as the Superintendent of Public Instruction might advise and the qualification of the candidate would merit. Even then, there was no popular demand for advancement, and so, after a brief and somewhat successful trial of the law creating the county system, our State Legislature yielded to what was felt to be the popular will, and repealed the law before it had been long enough in force to overcome the prejudice of the people against it, from the start, and the many other difficulties it had to meet.

For many years the farmer had been in a state of unrest, because in the world's market no distinction had been made in his grain, wool, stock, and other products of the farm, and those of his less enterprising neighbor, who might be content in producing inferior kinds. By means of the press, and in other ways, his complaints and wants were made known to the world until a popular demand gave rise to "trades unions," "boards of trade," and other organizations in the interests of commerce. These have been so successful in establishing grades that there is scarcely an article sold or bought on the market that has not upon it the brand of the grade to which it belongs. Producer and consumer have been benefited alike by these institutions. They have increased the wealth of the producer in that he has been fortified against the unscrupulous dealer in and the producer of the inferior article. It supplies the consumer with "water white" and other non-explosives, instead of an inferior kind that would otherwise be crowded upon the market to the destruction of his life and property.

Men, competent to examine into the nature and condition of articles of commerce in whatever form, are appointed as judges, and their seal upon the article tends toward establishing a price according to the grade assigned it.

Popular sentiment is not satisfied with grading articles of commerce alone. It has placed a higher standard upon the good than upon the evil; it regulates society; it places behind the sacred desk men who can appeal to the reasoning forces of the mind as well as of the emotional nature; hence we hear men speaking of the honorable, the high-minded lawyer, the skillful doctor, as well as the fourth-rate lawyer and the deceitful quack.

Confidence is so restored on account of the system of grading that men trust themselves only in the hands of those noted for honest dealing and skillful practice. And so the weak may be protected against the strong,—the unsuspecting against the wiles of the unscrupulous. In this way we may hope for the survival of the fittest.

What I have said is to illustrate the fact that there has been and still is a demand for a standard by means of which men might hope to be rewarded for their efforts at reaching a higher excellence.

The question need not be asked: Has equal attention been given to grading teachers as to what all will admit is of vastly less importance? Why not is plain enough, for, in many cases, persons have been chosen to decide as to the fitness of candidates who were not competent to discriminate between the true and the false teacher. Hence licenses were given to nearly if not quite all who applied for them; hence, also, in almost every household could be found one or more *teachers* (?) who, ever watchful for the first opportunity to *keep* school, regardless of fitness for so responsible a position, for the sake of teaching some time in their life, were willing to work for so small a sum that the true teacher, who had devoted years and expended much in preparation for successful school work, was driven into comparative exile or found employment in more inviting fields of labor, with less responsibility and better pay.

As a result, the terms school and school-teacher became synonyms of a low order of things. Hence, to be in keeping with the system of education as administered among the country schools, a first rate school-house, provided with apparatus, grounds and suitable out-buildings, had ceased to be a matter of interest among the people. It was only necessary to keep school in the district three months during the year in order to obtain the proportion of the public school fund, due on that account alone. To disburse that fund was the chief attraction since it would not be likely to go out of the district,—home

talent being so plentiful that no time need be lost in looking beyond the immediate neighborhood for a person to keep a "small, backward school." "*Any one will do, so we can draw the public money,*" was too common a remark to attract notice. All and more than this was true of our educational interests a little more than one short year ago.

It is true that, from 1867 until the county system was repealed, the slumbers of the people had been disturbed not a little; but they, apparently conscious of the removal of the cause of their disquietude, fell back into a sleep more deathlike than ever before.

How to awaken them so as not to provoke their wrath; how to make common cause with them; how to make the supply equal the demand for teachers and, at the same time, so grade them as to rid the country of those incompetent and to invite in the better class of teachers; has been a subject of very great concern to those having this work in charge.

In considering the question of supply and demand, the Board of our county (Calhoun) fixed as a standard for the 3d grade an average of 75 per cent, the candidate not to fall below 50 per cent in any one of the branches; that of the 2d, an average of 80 per cent, and of the 1st 90 per cent.

It was thought that, at this comparatively easy rate, the schools could be supplied with teachers of the 3d grade at least; but the contrary was proved and many were without teachers. The demand became so great as to compel school boards to offer higher wages; this and other influences called back some who had abandoned the profession and induced others to engage in the work, until all were provided, although many were licensed by special grade.

At the spring series of examinations the same standard was continued, save that the candidate must not fall below 75 per cent in arithmetic, geography, grammar, orthography, and theory and art of teaching. After a few of the first examinations, it became pretty generally understood, among teachers, that a better knowledge, at least, of the text and theory and practice, would be absolutely necessary in order to merit a certificate. As a result, at every public examination, from a few of the first, teachers have continued to reach a higher standard of excellence; so that, whereas at first no higher than 3d grades could be given, we now have a fair proportion of teachers with higher grades or who will merit them at the next series of examinations.

It is believed that no advanced standard for 3d grade, at least, should be required until the higher grades are increased so as to meet the demand for teachers. While it is believed that teachers ought to be encouraged to strive for something better than a 3d grade, great care should be used, in determining upon what constitutes a higher grade of teaching, before advancing them. So much caution should be exercised that the people may readily understand that the one holding the higher grade can and will teach a better school than the one with a lower grade.

Teachers should be given to understand that more will be expected of those holding the higher grades and, no matter how much they may know of the studies to be taught, their methods of and success in teaching should be thoroughly tested and inquired into before promoting them from a third grade. I believe that the teacher, content with a third grade only, ought not to be retained beyond the time when those with higher aspirations shall be in supply to meet the demand.

It is believed that, since the certificate bears on its face the studies the candidate has passed in as well as the grade of issue, the board of examiners should reserve to themselves, and exercise the right to issue the higher grade

to those of known ability to instruct and govern, notwithstanding a knowledge of the studies might not reach beyond those required by law.

It should be the duty of the board of examiners to instruct the people in what may be expected of the different grades, teaching them how to discriminate closely between them, and the board should never issue the higher grade to a doubtful candidate. Misplaced confidence by the people in the board would lead to serious results, and would do more toward hindering the progress of the schools just now than anything else.

Teachers, made to understand fully what will be expected of them, will not disappoint the people in their estimates upon the several grades. Thus they will learn to discriminate as closely between the different grades of teachers as between the various products of farms as they are carried to the market.

Again, teachers should understand that hereafter no one will be considered competent to occupy a place in the school-room who is not abreast with the times; current events are as much for the teacher as for the lawyer, politican, or preacher, and that one who will not seize upon every opportunity to increase his knowledge of the world's movements is not qualified for any grade.

Teachers who are not readers of some sort of an educational journal, and have not read and are continuing not to read books on teaching and school management, should be carefully considered before being licensed, even with a third grade. The age demands it and the people expect it, and, if the examiners throughout the State will give just a little attention to this matter our teachers may not be a whit behind any class or profession.

In some parts of the country, teachers' wages have so advanced that none, but the tax-payer, have reason to complain, and even he is patient beyond precedent, and will continue so if his expectations are fairly realized from the promises of those having in charge our educational interests. Then, if we hope to meet the wants of the people—yea, more—the *demands* of the people, we must send out teachers qualified to instruct and enlighten the patrons of our schools and to advance education among them as well as to teach their children.

When these aims are fairly reached, when men are brought into full sympathy with the cause of education, when patron, teacher, and pupil shall come into complete harmony, vying with each other in efforts at promoting and disseminating knowledge among their fellows, the millennial time will have fully come to the educational world, and, may I not add, those who have done most toward supplying the public schools with the best grade of teachers shall not be least in sharing the reward of the faithful.

Discussion.

The discussion of the preceding paper was opened by Milo D. Campbell, Secretary of the Board of School Examiners of Branch county. His remarks were as follows:

I do not suppose I was asked to open this discussion because it was thought by our worthy Superintendent that I would advocate any marked changes in the plans and present arrangement of things, for it seems to me that I could not quicker make an apparent fool of myself than to kick hard against the system which has been wrought out and added to by the gray-haired wisdom of generation after generation of educators, both within and without the borders of our State.

But since evolution and change have been as constant visitors upon our

school-rooms and school systems during the past as upon almost every factor of our government or its industries, and while so often we are hailing a supposed perfection, we look only to see its laurels snatched from it and placed upon something better, so it may not be entirely presumptuous for us to venture a few thoughts, though they be not acceptable to a majority, or find welcome by adoption.

Ideality and reality are so widely separated in the profession of teaching that with almost every advance toward the former we stumble over obstacles greater than *civil service reform* or *political assessments*.

And among these obstacles we find that other vocations are more compensatory, the limit of the average teacher's experience being placed at a few terms at most; the gentlemen using it as a stepping-stone to some other profession or business, and the ladies, soon, very soon, some of them, taking smaller schools with greater or less privileges, and with certificates for life or during good behavior. And thus upon every hand the rapid advance of our common school interests as pertaining to better teachers and teaching is impeded by barriers over which we have but little control.

But with more direct reference to the subject under controversy,—the certificating of teachers, and in determining what should be their grades and requirements,—there is one underlying principle it seems to me that should govern our deliberations and mould our conclusions, and that is the educational necessities of the half million children within the borders of our State whom these teachers are to instruct.

I think not to exceed 8,000 persons have ever graduated at the colleges and other educational institutions of this State where degrees are conferred, while more than a million and a half of boys and girls have gone forth into the activities of life and business with a public education finished in our rural district and village schools.

And thus when I use the term educational necessities I mean it as contradistinguished from educational luxuries. I mean such a fundamental education as being finished in our common district school will prepare the child for the farm, the store, the shop, for citizenship and the family.

By educational luxuries is meant those branches that are not strictly essential to the business man's education, or, if the line may be drawn, those branches, which, though more or less useful and ornamental may be dispensed with easier than others.

While it would be exceedingly pleasant to have every teacher versed in foreign languages, in the arts and sciences and in all that goes to make up the fully and completely educated man or woman, yet such a fairy-land within the realms of pedagogy never has been and never will be. Our common district schools cannot be and ought not to be used for any other purpose than to build and complete the average business man's education. And when we can look out over the varied occupations that are bustling about us upon every hand, and when we can determine upon what common rudiments of knowledge and brain-tools our boys and girls should have in a preparation for these several industries, then have we made the first systematic step toward what should be required of the teacher who is to instruct them.

The various grades of certificates and the time for which granted are, it strikes me, wisely arranged and well adapted to our present wants, and the only branch of the topic before us which I would care to consider is the one bearing upon the requirements to be made of teachers before we shall grant to them these various grades of license.

As the grading of certificates now stands, we are chiefly concerned in the lowest or third grade, for it is this that must determine the minimum of qualifications, and with this certificate the teacher may go out and teach in any school district in the county, not under special enactment or charter. And thus when we deliberate or make rules or laws specifying the qualifications an applicant must have to entitle him to a third grade certificate we are looking beyond the teacher to the pupils whom he is to teach, but when we are determining upon the additional qualifications a teacher must have to entitle him to a second or first grade certificate, we then have the rewarding of the teacher in view and the honoring of him for his higher attainments.

Our Legislature, in the year 1881, added to the list of requirements for third grade certificates United States history and civil government, after that year, and it is observable in Branch county, as undoubtedly it is in other parts of the State, that applicants for examination have passed as satisfactory in those two branches as in almost any of the others that have been required for scores of years. And this fact but demonstrates that those things essential and necessary to equip the teacher for his duties may, with no injustice, be required of him by giving sufficient notice of the same.

It is said that a certificate is the first dead point; and how many times do we find the truth of this statement verified in almost every public examination. The younger applicants and younger teachers are those who far excel others who, many of them, have been in the line of duty for years. And, it is my opinion, that fully one-half of the applicants rejected in Branch county during the past year have been the old teachers who have taught from five to fifty terms of school each. I am not sure, though not prepared to recommend, but that if it could be done, it would be but justice to require of teachers who have taught and received previous certificates to pass at each succeeding examination with better marking.

But one thing is certain, our teachers need enough mental stimulus to keep them from sleeping upon present attainments; the size and frequency of the doses to depend entirely upon the supply of and demand for teachers.

Branch county has at present more qualified teachers than she has places for them to fill, and trusting that this may be true over the greater portion of the State, there is another branch that I would add to the requirements for third grade certificates after the year 1883, with as timely a notice of the same as it is possible to give, and that is physiology. It seems but well that the teacher who presides over the growing bodies as well as over the growing minds of children should know something of the principles and laws by which these two factors may be properly moulded and developed in their parallel growth. The teacher should understand this branch though he may not be called upon to teach it as a text in the school-room. Its lessons are of vital importance to him in the fullest meaning of these words, and I trust that for the interests of longevity and the human race that the time may not be far distant when the elementary principles of hygiene, at least, may be early taught to our children. But it is needless for me to recount further reasons for requiring this branch, since they are as familiar to you now as they would be after any further amplification I might make.

Passing from the third to the higher and complimentary grades of certificates: Briefly, I should require for the second, in addition to the branches demanded for third, book-keeping (single entry) and school law, and to be granted only to those who have taught at least eight months with approved success.

For first grade certificates, I would add to the requirements for second and third grades, philosophy and botany, with discretionary studies to be added, elective with the several boards of county school examiners.

And allow me to venture a conviction of my mind. Although algebra is now required in Branch county for second grade certificates, yet, nevertheless, I believe that general history, English literature, rhetoric, geology, astronomy, and chemistry should precede it and that it should not be required for any of the several grades of certificates; that it has no business in our common district schools, and that it should be eradicated and rooted out, and something that blossoms and bears fruit planted in its place.

Returning to the first grade certificate, I believe it should be given only to those who have taught at least fifteen months with approved success, and at least two terms in some one school district.

Since teachers are somewhat migratory in their habits, and are constantly changing about, and from one county to another, it would seem advisable that all of the foregoing requirements, except the elective studies for first grade, be crystallized into statutory enactments, that the notice of the same might be general.

That the system might not be too uncompromising and the demands too rigorous and inelastic, I would leave to the discretion of the various boards of school examiners, aided by the suggestions of the State Superintendent, the fixing of percentages to be required for the various grades of certificates.

And now, in conclusion, while I am aware that the thoughts and suggestions I have thrown out are far from faultless, and are in many points vulnerable to attack, yet I trust that at least some single grain of thought may have been dropped, that in the rich and fertile soil of this convention may germinate and develop into something worthy of your deliberations if not your endorsement.

The paper of Mr. Marble was further discussed by Messrs. E. P. Church of Montcalm county, Clark Stanton of Oakland county, David Howell of St. Joseph county, S. G. Burkhead of Grand Traverse county, D. E. Haskins of Jackson county, W. A. Rowe of Ingham county, T. S. Clark of Oakland county, G. R. Malone of Mecosta county, J. W. Ewing of Ionia county, and J. S. Goodman of Saginaw county. The remarks of these gentlemen have not been furnished for publication.

Will H. Brunson, Secretary of the Board of Examiners of Clinton county, then presented the following paper:

HOW TO SECURE CLASSIFICATION AND GRADING IN DISTRICT SCHOOLS.

This might be considered a double subject, but I take it that the grading of a school is only the more thorough classification of it. Can district schools be graded, not in some one county where the circumstances are peculiarly favorable, but throughout the State? Allow me to refer you to the remarks of Wm. H. Payne upon this question. In his work entitled "School Supervision," in answer to this very question, he says: "The school to which reference is made consists of from 20 to 40 scholars, varying in age from 6 to 14 years, taught by one teacher. * * * * * * The two things which make it very difficult, if not impossible, to sustain a graded course of instruction in such schools are great irregularity of attendance and the frequent change of teachers, whereby it is almost impossible to follow any settled

line of policy. The fact that many pupils attend school but a part of the year,—during the winter,—perhaps, will make it almost impossible to avoid forming classes not provided for in the graded course; while a frequent change in teachers will, in many cases, defeat the wisest plans. There would be much more hope of introducing a classification into country schools, if teachers in general understood the principles which must be observed in the formation and preservation of a graded course of study. A fair degree of professional skill generally disseminated among teachers and a desire on the part of boards of trustees to employ the best obtainable talent, can alone carry into effect that settled line of policy which is absolutely required in order to sustain a systematic course of instruction." And again, "While in this and in similar cases a system of grading is theoretically possible, there will be found, as in the first case, disturbing causes which may defeat the wisest plan. I have no doubt that country schools may be graded to the immense advantage of their pupils; but whether the system can be sustained will depend very largely upon the skill of those who have them in charge."

So says Prof. Payne. Theoretically they can be graded, but practically they cannot *at present*. But whether they can be graded or not, they can be more thoroughly classified than they are now, and not only can the work be more systematically done, but it can be presented to the child's mind in the order in which the child is best able to receive it. This work, together with the more thorough training of teachers may, in time, bring district schools to a condition where grading will be advisable. In this article I shall speak briefly of an elastic grade that will fit district schools of different degrees of advancement, and of the changes which I think should be made in the school law, and then more at length of the work that we can do with the law as it is. First, let me refer you to the grade of which I spoke:*

T = number hours devoted each day to recitation.
t = average length of time devoted to each class.
n = number of recitations to each pupil.
Y = number of years in school course.
Let T = 6, t = $\frac{1}{4}$, n = 5, 4, $3\frac{1}{2}$, or 3.

5 years' course. $\begin{cases} T = 6. \quad t = \frac{1}{4}. \quad n = 5. \\ Y = \frac{T}{n \times t.} \quad Y = \frac{6}{5 \times \frac{1}{4}} = 4\ 4\text{-}5. \end{cases}$

6 years' course. $\begin{cases} T = 6. \quad t = \frac{1}{4}. \quad n = 4. \\ Y = \frac{T}{n \times t.} \quad Y = \frac{6}{4 \times \frac{1}{4}} = 6. \end{cases}$

7 years' course. $\begin{cases} T = 6. \quad t = \frac{1}{4}. \quad n = 3\frac{1}{2}. \\ Y = \frac{T}{n \times t.} \quad Y = \frac{6}{3\frac{1}{2} \times \frac{1}{4}} = 7. \end{cases}$

8 years' course. $\begin{cases} T = 6. \quad t = \frac{1}{4}. \quad n = 3. \\ Y = \frac{T}{n \times t.} \quad Y = \frac{6}{3 \times \frac{1}{4}} = 8. \end{cases}$

It will be seen from the above that, T, being fixed, t, n, and Y are dependent upon each other. The increase of either one must necessarily decrease one of the other two. So, when Y increases, t or n must decrease. That is, if the number of years in the course be increased, either the average length of recitation or the number of recitations to each pupil must be decreased. In the eight years course given above it would probably be better to increase n and decrease t. It may be urged that 15 minutes is too short a time for recitation.

*NOTE.—The idea of the following grade was derived from Prof. Payne's "School Supervision."

That is true, but it is no argument against classification; for without classification teachers have less than 15 minutes for each recitation. It will also be urged that some scholars will belong partly in one grade and partly in another. That is true, but what of it? Let each scholar go in the classes to which he really belongs. That is now done in graded union schools.

If it is not possible for a teacher to grade a school thoroughly, he can at least classify the younger scholars,—those, perhaps, who read in the first, second and third readers; make three grades of them, classifying them largely according to their knowledge of reading and language. At the end of a year the third reader scholars will be ready to take up the fourth reader, and new scholars will come in who will be ready to take up the first reader. There will then be four grades instead of three. In another year there will be five grades.

The objections which Prof. Payne urges against the feasibility of grading district schools are: 1st, Lack of professional skill on the part of teachers; 2d, Frequent change of teachers; 3d, Irregular attendance. These are all weighty objections, and objections which will not be speedily removed. The first two will be gradually lessened and can be partially atoned for by intelligent *county* supervision. The third I have no hope of ever seeing removed. Another objection presents itself to my mind, which I think is equally as fatal as those mentioned by Prof. Payne, and that is the lack of uniformity of text-books. Certainly no district school can be properly classified till that objection is removed. As long as the present system of examination lasts nearly all efforts to improve the district schools must emanate from the county boards (inspired by the State Superintendent), and operate upon school officers and teachers. If it is not possible to enact a satisfactory law giving us uniformity of text-books throughout the State, then I think it would be wise to provide uniformity of books in each county, giving the county boards in their respective counties authority to settle the matter. I am aware that this would be giving to county boards considerable power and subjecting them to strong temptation; but I think they are able to use the one and resist the other, both successfully. And, too, I think most county boards are reasonably competent for such a task, even considering the matter abstractly. But, compared with the ones who at present decide the matter in ordinary district schools, they are the ideal of competency. Does any one doubt that any board of examiners is more competent to decide the text-book question than the ordinary school board? Any county board having secured uniformity of text-books in their county, could then devise a system of grading for the district schools of that county. I do not imagine that a grade of this kind would exactly fit every school in the county, but, with slight variations to suit the particular circumstances of each school it could be accommodated to all the schools of the county. County boards, by conference, could make their systems in principle substantially alike. In my opinion the grading of district schools to be thoroughly successful must be made alike through as large an extent of territory as one county, at least. Moreover the teachers must be supervised by, and receive the assistance of, the county board. Especially is this needed while the present lack of professional skill and the frequent change of teachers continue.

But it might be more practical to consider the work that may be done by county boards in this direction under the school law as it stands, and as it will probably remain for two years to come. I think there is work which county boards and others can do *now*, and which will not only tend presently towards

the classification of district schools, but will be a preparation for the time when a more complete uniformity of books and grades will be secured. As I said before I shall take it to be an axiom in this subject that no successful effort can be made to secure the classification of any one school until uniformity of text-books is secured in that school. If that be true, is there anything that we can do to bring this about? My suggestion would be this: I have sent to every director in Clinton county copies of the following circular:

OFFICE OF COUNTY BOARD OF SCHOOL EXAMINERS, CLINTON COUNTY, }
St. Johns, Mich., December 6, 1882. }

CIRCULAR NO. 3.

To the School District Officers of Clinton County:

GENTLEMEN,—Allow me to respectfully call your attention to a provision of the general school laws of Michigan, 1881, Chapter III, Sec. 15, page 18. The first part of the section reads as follows:

"SECTION 15. The District Board SHALL specify the studies to be pursued in the schools of the district, and (SHALL) prescribe the text-books to be used, *which shall be uniform on each subject that may be taught.*"

You will notice that the law says the District Board *shall* prescribe the kind of books to be used, thus making it, not your privilege, but your *duty* to act. Some district officers to whom I send this circular have already done this, but many have not. Will you not allow me most respectfully to urge you to take some action upon this matter? Your teacher cannot do justice to his school if his scholars have two or three kinds of arithmetics, readers or geographies. It compels the teacher to have so many classes that he must spend a good share of his time in calling them up and sending them back to their seats. You can, if you wish, make the change gradually, and almost without expense. For instance, suppose a scholar is studying the first reader and is using a different kind of book from the one prescribed by the Board. If you do not wish to compel him to change his book for a new one, wait till he has finished that book and is ready to take up the second reader. Then compel him to buy the kind you have selected. In this way the change *will cost nothing.*

The Secretary is at all times prepared to furnish school officers with the names of teachers who have not secured positions. He will attempt to answer all your letters upon this or any other school-matter as promptly as possible.

Yours, very truly,
WILL. H. BRUNSON,
Secretary.

NOTE.—Will the Director please give one of these circulars to each of the other members of the Board?

I cannot tell from observation what the effect of this circular will be, for the time which has elapsed since it was sent has not been sufficient to determine. I know that some boards have taken action upon the matter in consequence of the receipt of these circulars. I presume there are other boards that I have not seen who have also taken some action. Besides the immediate effect I think it will have another effect. I think it will impress upon the minds of some school officers the fact that it is their *duty* to prescribe the kind of books to be used. I think that, with this impression upon their minds, when they are approached personally by the teacher, or other persons, and urged to take some action, they will be much more easily influenced than if the circulars had not been sent. They will be apt to feel that the teacher is demanding a *right*, rather than requesting a *privilege*. For this reason I think some teachers will be able to induce their boards to prescribe courses of study.

This circular to the school boards I shall follow up with a circular to the teachers, calling their attention to the necessity of more thorough classification of their schools. I shall attempt to show them that in order to classify their schools well they must first induce their boards to provide uniformity of

books. I shall send each teacher a copy of the circular I sent the school boards and urge him to try to get his board to take some action. Some teachers will doubtless be induced to make the effort. Every teacher who does attempt to get his board to take some action, will, by that very act, be set to thinking about the classification of his school. He will try to present some argument to his board in favor of uniformity. A double purpose will thus be accomplished. The teacher will secure uniformity of text-books, and will at the same time work into himself some knowledge of the subject and enthusiasm in carrying it out. If every teacher could be put into that condition of mind a long step would be taken towards the proper classification of district schools. Perhaps it is better that the teacher should be compelled to *work* to secure this uniformity. The very fact that he must work will more thoroughly prepare him to put that uniformity to some use when he gets it.

This action on the part of district boards will not be secured at once throughout a county. When teachers come together at their county and other associations they will be thinking and talking about it. Therein lies an opportunity for improvement. When this spirit of inquiry is evinced, the matter of classification will be discussed. Teachers who are not posted will begin to inquire what it means. Thought, reading, study, on their part, will follow. Teachers who attend the institutes will see the necessity of heeding, and will be more able to understand the instruction there given with regard to the classification of their schools. Incidentally urging teachers to make out and follow a program of classes will aid us in this matter.

As far as my experience extends it shows me that there is a large class of teachers who can be induced to take an interest in any new subject connected with their schools only by asking them questions about it in their examination for certificates. If we wish them to study and to teach something about the local geography of Clinton county and Michigan, we must ask them to name the towns in Clinton county, to describe the Grand river by naming the counties through which it flows, and to locate some important places in that county and State. Just so with local history and civil government. This, of course, might be carried too far and made a hobby. But a few such questions in an examination carefully combined with others, so as not to cause too many failures, will set teachers to thinking and studying. I think something can be done for this matter of classification in this way. In my own county the examination in theory and art of teaching is conducted by one member of the board who generally devotes over half a day to it in an ordinary examination. To a great extent he tries to find out just how the teacher does teach and explain in school. I think that a few questions with regard to classification could easily be asked in such an examination. Each board could determine how many and what questions should be asked.

I have furnished the teachers of Clinton county with blanks, upon which I have asked them to make out a report of their doings during the winter term and send it to me. After this question has received fuller attention on the part of teachers, it might be well, in counties where these reports are had, to request them to report the condition of their schools with regard to classification. Anything that calls a teacher's attention to classification, that requires him to state definitely what he knows about classification, or how much or little classification there is in his school, will assist in crystallizing his ideas, and will stimulate him to further efforts.

One great obstacle to this work will be the ignorance and opposition of not only teachers and school boards, but of the people who sustain the schools.

And, in my opinion, this obstacle must be met fairly and overcome, or we shall never see district schools graded. We as teachers and school officers, cannot raise the schools in even a single county *permanently* to any higher standard than the average public sentiment of that county will sustain. There may be waves of public opinion that will rise above this level; there may be depressions between these waves that will sink below it; but eventually the average public sentiment that pays the taxes will, and ought to, control. How shall we overcome this opposition? Of course where a grade is introduced into a school, its success in making a better school will tend to argue this difficulty out of the way. But overcome it to a sufficient extent to allow the introduction of a grade and then to keep it there long enough to give it a fair trial. In my own county have been organized what are termed township teachers' associations. The name is a misnomer; for, while much of the work is done by teachers (especially at the start), yet the associations are formed to draw out and interest the *patrons* of the schools. They attend, read papers, and take part in the discussions. I have attended five such meetings during the past year, and each one was attended by from 100 to 200 patrons. These meetings give a splendid opportunity to elevate public opinion upon all school questions. It seems to me that much may be done in these meetings to elevate public opinion upon this question of classification and grading.

After the reading of Mr. Brunson's paper a recess was taken until 2 o'clock P. M.

Afternoon Session.

Pursuant to adjournment, the meeting was called to order at 2 o'clock by Superintendent Cochran.

On motion of P. A. Latta, Secretary of the Board of Examiners of Allegan county, it was requested that all papers and remarks presented at this meeting be furnished to the Superintendent of Public Instruction for publication in his next annual report.

The next paper to have been presented was one upon the subject:

THE SECRETARY: HIS DUTIES AND RESPONSIBILITIES,

by Geo. A. Parker, Secretary of the Board of Examiners of Sanilac county. Mr. Parker being absent, the following letter from him to the Superintendent of Public Instruction was read by Clark Stanton, Secretary of the Board of Examiners of Oakland county:

Port Sanilac, Mich., *Dec. 23, 1882.*

Hon. Varnum B. Cochran,
Superintendent of Public Instruction:

Dear Sir,—Owing to a combination of circumstances, it will be impossible for me to keep my appointment at the County Examiners' Convention at Lansing on the 27th inst. I regret my inability to attend, and sincerely hope that the meeting may prove to be one of mutual pleasure and profit.

The time which I should have occupied in reading a paper on "*The Secretary: His Duties and Responsibilities*" will be much more profitably filled by the discussions of those better able to do the subject justice.

I would like to suggest a few points in connection with the secretary's duties

and responsibilities, for attention and discussion, and would be pleased to learn what the prevailing opinion is among the examiners:

First, The law makes it the duty of the board to prepare sets of questions for all "special" examinations, the State Board of Education preparing questions for the two "regular examinations" only and very plainly and emphatically refusing to prepare any others. Some of the examiners are obliged to hold from one to three examinations during the month of September to accommodate those teachers whose schools commence early. The work of preparing all these questions must be done by the board of examiners, nominally; by the secretary, virtually, and the printing and extra labor *paid for, by whom?* There should be some standard of uniformity about these special examinations (I am not speaking of specials before the secretary alone, but the public special examinations), or the examiners in some counties may fix upon a much higher standard of qualifications than those of other counties, or even higher than those of the State Board of Education, and the later examination be easier than those arranged by the examiners themselves. Such things have already occurred, not producing any serious annoyance but calling for attention. Now, how far are the examiners responsible in such cases, to what extent is the secretary personally responsible, from whose pocket does or should the additional expense come, and why does not the State Board of Education prepare these lists of questions?

Second, After the public examinations are over, frequent applications are made to the secretary of the board for "specials," the applicants sometimes bringing with them petitions from school boards setting forth the necessity of giving "special" certificates to them. In some cases the candidates were unsuccessful at regular examinations, had previously engaged their schools, and come armed with the assurances of the school officers that "no other teacher can be found, and we shall have no school." The latter statement is undoubtedly true in this county since our fall examinations, as the standard of qualifications was higher than it had before been, and a larger percentage of failures was the result. There has been a "wholesome scarcity" of teachers this fall, causing considerable temporary inconvenience, but which will work out all right in the course of another year. In the mean time, how far should the secretary exercise discretionary power in granting these "specials," in case his judgment should conflict with the instructions of the county board?

Third, Isn't it putting too much responsibility upon the shoulders, not alone of the secretary, but the whole moral, mental, and physical force of the combined stamina of the three county examiners to make them say of every person to whom a certificate is issued that the bearer "*Is* a person of good moral character?" Many persons apply for certificates who are strangers to the board, and whose so-called "recommendations" are written by persons who are still greater strangers, from the fact that you cannot see their countenances. We have seen instances of certificates being revoked because of grossly immoral conduct and intemperate habits. In some States the certificates make the examiners say, "We *believe* the bearer is a person of good moral character," which, it seems to us, is all that should be required.

Many other points in connection with the work of the secretary will present themselves for discussion. But my letter is already too long to write of more.

In conclusion, I would say that the "new system" is working well in this county so that we are encouraged to look for good results.

Yours, very truly,

GEO. A. PARKER.

Discussion.

The discussion of the subject presented in Mr. Parker's letter was opened by Wesley Sears, Secretary of the Board of School Examiners of Macomb county. His remarks were as follows:

In reply to the queries propounded in Secretary Parker's letter, I will state briefly the experience of the Examining Board in Macomb county.

In regard to the payment of necessary bills, for printing, blanks, stationery, postage, etc., the secretary, at the close of each quarter, has prepared a full bill of such expenses, properly certified as to its correctness, and has presented it for payment to the county clerk. The clerk has never refused to give an order on the county treasurer for the amount, neither has the treasurer ever refused to pay it.

I presume the strictly proper way, and possibly the legal process would be to present the bill to the board of supervisors for allowance. It certainly is the duty of the county to bear these expenses, although the law makes no provision for their payment.

Concerning the preparation of questions for the special examinations, it has been our practice to parcel out the topics of examination to the members of the board as they may agree, and each prepares one or more sets of questions upon his topics. The questions, in manuscript, are then handed to the secretary, and he looks after their printing. I can see no reason why the secretary should be expected to do all this work, when if each member of the board does his share the labor is comparatively light.

How difficult shall these questions for special examinations be? Our custom has been to conform as closely to the State questions as possible; thus making the examinations of any given series (spring or fall) all about the same degree of hardness.

The questions asked in the letter just read, pertain more to the duties of the board than to those of the secretary. Let us give a little attention to the specific duties of the secretary; and especially to those *implied* duties which the law does not define.

A law can not, *in every particular*, define the duties of any officer. There are always implied trusts in the practical working of any law, which it is impossible for a legislator to foresee, and consequently for a law to specify. It seems to me that we ought to particularly discuss these undefined duties of the secretary, and not spend much time upon those responsibilities which the law makes plain and hence need no elaboration.

A casual examination of section 133, General School Laws of 1881, will convince any one that the duties of the secretary are not few. Although named under nine heads, there are several times nine duties enumerated. I shall first mention his responsibilities as a clerk. He is to keep all records of the proceedings of the board; also, a record of all examinations, fill all certificates and sign them, act as treasurer of the board, etc. In all of this work his duties are not unlike the duties of any clerk. The characteristics of a good clerk are neatness, exactness, and promptness. These should characterize the secretary of the board of examiners.

All books should be kept in such a manner that any person could determine all facts concerning the certificating of teachers, and concerning the action of the board at its meetings. Promptness is especially requisite after examinations in informing applicants of the result of the examination. Injustice to applicants often follows a laxity in this respect.

I am of the opinion that after any given series of examinations, it is advisable to close up the business of that series by granting certificates to all successful applicants, and informing all unsuccessful applicants of their standing, stating reasons why certificates are withheld, and returning their institute fees. A neat printed blank may be prepared for this latter object which will facilitate and greatly abbreviate the labor.

The secretary should be a practical school man. He will be called upon to determine whether teachers are competent, and whether schools are being conducted in a profitable manner. It certainly requires a man acquainted with the machinery of the school to determine these questions.

The secretary is the legal authority for granting special certificates. He must, in such cases, be qualified to judge for himself, whether persons are competent to teach.

Let me state here that it seems improper to grant special certificates to any who would fail to pass an examination before the board, *except:* first, when no legally qualified teacher can be obtained; second, when the school term closes before the next public examination; and third, when the school officers request such applicant to be granted a special certificate. If these rules are followed it will obviate future trouble.

The secretary should be a man of wide acquaintance throughout the county. He, being the executive officer of the board, will be consulted more frequently than the other members: 1st, By teachers, seeking vacancies; 2d, By officers seeking teachers.

This fact necessitates quite a thorough knowledge, on the part of the secretary, of the qualifications (personal as well as scholarly) of the various teachers of the county; and also a knowledge of the requirements of the various districts of the county. Again, he should know, as far as possible by visitation, the progress of the schools, and the practical ability of the teachers.

Our experience in Macomb county has shown that the present method of supervision is ineffective. If I have found a weak spot in the present school law, it is right at this point. I do not wish to be understood to say that I believe a change in the law advisable, but quite the contrary. It is true, however, that the present method does not give effective supervision at present, but my observation goes to show that the fault is not so much in the law, as in the officers elected to fulfill the provisions of the law. The reports prepared by the chairmen of inspectors, if prepared at all, are usually quite defective, giving little or no information upon those points of most interest to the examiners, as "Efficiency of Teacher," "Progress of Pupils," etc. All this argues in favor of a secretary who will devote some time to visitation, and thus be able to personally judge of work being accomplished. His acquaintance with school officers, township officers, and teachers will aid very materially in advancing the school interests of the county.

I want to emphasize this point by saying that if the secretary will only interest himself in this matter, he can do much to awaken that lively interest in the chairmen of boards of inspectors which now seems to be almost wholly wanting.

If the present plan cannot be brought to a successful issue, I am in favor of giving the supervising power entirely into the hands of the secretary of the examining board, increasing his salary so that he can afford to give his entire time to the county schools.

In the meantime let the entire board, especially the secretary, give such of their time to visitation and advice that our district school may be an ever-increasing factor in the school system of Michigan.

The subject presented in Mr. Parker's letter was further discussed by Messrs. G. R. Malone of Mecosta county, and Ephraim Marble of Calhoun county. The remarks of these gentlemen have not been furnished for publication.

Ephraim Marble, Secretary of the Board of Examiners of Calhoun county, offered the following:

WHEREAS, The teacher in our public schools ought to be pointed to as the highest type of morality and temperance;

AND WHEREAS, The patrons of the schools are compelled to trust this most of all important subjects—the moral character of teachers—to the judgment and decision of the board of examiners; therefore, as the sense of this convention, be it

Resolved, That no one shall be deemed qualified to teach who is not a total abstainer from all intoxicants as a beverage, as well as from the use of tobacco in any form.

Motions to table the resolution, to postpone it indefinitely, and to amend it by striking out the words "use of tobacco in any form," were successively made and lost, but a motion to amend by substituting the word "should" for "shall," in the first line, was carried. The resolution was then referred to a special committee, consisting of Messrs. Ephraim Marble of Calhoun county, J. S. Goodman of Saginaw county, and W. H. Brunson of Clinton county.

David Howell, Secretary of the Board of Examiners of St. Joseph county, then presented the following paper:

ENDS TO BE ATTAINED AND METHODS TO BE USED BY THE EXAMINERS IN THEIR WORK FOR THE SCHOOLS.

From the nature of the subject upon which I am asked to write, details must enter largely into the discussion, and I trust I shall be pardoned for frequently alluding to the work as now planned for St. Joseph county. It will be impossible to discuss all that boards of examiners should do in the brief time allotted to a single paper, and it therefore becomes necessary to single out and to confine our attention to those ends to be attained, which are seemingly of greatest importance.

The statute law which created the office of county examiners, makes the examination of teachers the first and chief duty of the incumbents of that office. It should be the purpose, therefore, of examiners to examine, with care and rare judgment, all applicants for license as teachers in the common schools of the State.

In the discharge of this duty it becomes imperative upon examiners to know what qualifications teachers should possess. The ideal teacher, one thoroughly qualified in all repects, is beyond human possibilities. We may, however, expect, and should demand, that the men and women who undertake the education of our children should be persons of culture, refinement, and moral worth.

The law contemplates a high standard of moral excellence, but just how one's moral qualities shall be rated in grading his license is not defined; but the applicant must possess a good moral character. The teacher ought to be a preëminently moral man, faithful and conscientious in the discharge of his duty.

Examiners should guard well the interests of society and the State by refusing to license applicants who cannot give satisfactory evidence of moral

character. The teacher should also be a man of generous common sense, genial, self-possessed, even-tempered, fertile in expedient, able to conceive a plan and to follow it.

As to the literary attainments of applicants, to be highly successful in the school-room, the teacher must have a thorough knowledge of the subjects he is to teach. It is not enough that he be able, with text-book in hand, to determine whether his pupils answer his questions correctly, but he should have such a competent understanding of the subject that he can lay aside the text-book and by added illustrations cause the subject to glow like a live, burning coal. He should have that general culture and intelligence that will enable him to bring to bear upon the subject in hand the new lights that science and history are continually bringing out. He should have definite and abundant knowledge of school economy, which relates to the organization, classification, instruction, discipline, and hygiene of a school.

The law evidently contemplates that there will be applicants of different degrees of scholastic attainments, as it recognizes three grades of certificates, therefore three classes of teachers; but upon what basis or according to what standard the certificates are to be graded it is provokingly silent.

I shall not attempt to define a basis or suggest a standard for this purpose; but I desire to enter an earnest plea for a uniform grade throughout the State, and sincerely hope that the Department of Public Instruction will bring about such a result.

I am confident that a uniform gradation of certificates may be established and more easily maintained under the present law than would be possible were the examinations conducted by one person in each county, with limited tenure of office.

We already hear it said that some boards of examiners are "very strict," while others are "very easy." There are undoubtedly many teachers now holding certificates who should not have been granted any. There may be some excuse for this, as under the new order of things neither teachers nor examiners understand the relations which should exist between them.

In the county in which I have the honor to be a member of the board of examiners, five applicants holding regular certificates, given in other counties, have failed to obtain a third grade license. This suggests a difficulty somewhere. It may lie in the difference of questions. We may not grade as other boards do. It is more than probable that both these causes led to the change.

I have noticed that the questions prepared by the board of St. Joseph county, for successive examinations, are not uniform. This, I think, should not be so. Now, what is true of one board is more likely to be true of many. And why should boards of examiners not grade alike? If each inspected its work with care and a determination to serve only the public good, and to elevate the character of the schools, there would be but little difference in marking manuscripts.

Granting what I have said of the qualifications of teachers, and the non-uniformity of questions, to be true, the preparation of questions, the answers to which form the test of the applicant's ability successfully to teach and manage a school, becomes a matter of grave importance.

As the State Board of Education is required to prepare, and the Superintendent of Public Instruction to furnish boards of examiners with questions suitable for the different grades of certificates issued, it seems eminently proper that all questions for examination of teachers should emanate from that source.

Many of the present examiners are inexperienced in this work, while the members of the State Board of Education are, or should be, men of large experience in teaching and school management, and it is safe to assume that they possess the requisite qualifications for preparing the kind of questions needed.

As long as each Board of Examiners prepares the questions for its own use, there will be as many standards as there are counties, and in many counties the standard will be a vacillating one.

Among the many advantages in addition to uniformity, which this plan would secure, I mention only that of economy. As the number of examinations in each county is limited, the number of applicants at each must in most cases be great, and it becomes necessary to have the questions printed. To print the questions in each county would entail a large expense upon the State, while if all were issued from the office of Public Instruction the expense would be but nominal.

The methods of conducting examinations may, perhaps, be left to individual boards of examiners to be arranged as circumstances seem to demand. There are, however, some general arrangements which should prevail in all examinations.

The time for holding each examination should be extensively advertised, and the schedule of dates should name the day of the week, as the last Saturday in September, the last Friday in November, etc. This schedule should be arranged with care and should remain unchanged from year to year, that teachers may never be mistaken as to time and place, and that they may feel that, even in this, system is operating.

The questions upon each subject should be given out separately, and the time to be given to each distinctly stated at the beginning of that hour. Notice should be given five or ten minutes before the expiration of the time, that all may bring their papers to a proper close. When the time has expired the papers should be neatly folded and labeled, and taken up at once. Those papers which are not ready at the proper time should not be received. The time allowed to each branch must vary with the number and nature of questions, and, I think, should be a matter of suggestion on the part of the Superintendent of Public Instruction. Communication should not be allowed, and any applicant violating this rule should be dismissed from the class.

For convenience of handling, the paper used should be of uniform size. All written examinations should be prepared with pen and ink. A few brief directions for preparing manuscripts will aid applicants in saving much time, and will also aid examiners in reading manuscripts.

In fact, the examination of a class of teachers should be a model school examination, and examiners should strive to make it an educational exercise as well as a test of fitness to teach.

The second object to which I shall call your attention and for which boards of examiners should labor earnestly, is to secure uniformity and system in the organization and classification of schools. This is a subject of great importance and corresponding difficulty.

I think I may safely assume that in arguing in favor of grading our common or district schools, I am in sympathy with the Department of Public Instruction. I assume this from the fact that the Superintendent of Public Instruction has issued a graded course of study for district schools, and "earnestly appeals to examiners and inspectors to give it force and effect."

What boards of examiners generally are doing in this matter I am not informed,

but in St. Joseph county the board is taking the preliminary steps which it is hoped will lead to this desired result.

In the absence of direct legislation upon this subject, much of our hope lies in the fact that under the law boards of examiners are perpetual, and may, by adopting a well-defined and vigorous policy, succeed in accomplishing even more than is contemplated by the law.

I am aware that in this the relations of boards of examiners to teachers are only advisory, yet if teachers are informed that a non-compliance with the suggestions of the board will be considered sufficient cause for withholding a certificate, a readiness on their part will be at once secured.

One of the most serious difficulties which we meet at the outset is the inefficiency of the teachers by whom the schools have been taught for some years past. They have but little knowledge and but few ideas on this subject.

Another serious obstacle in the way is the irregular attendance and tardiness of pupils. To show how great an evil this last is, I give the number of cases of tardiness in 74 schools of St. Joseph county during the month of January last. The average daily attendance in these schools was 1,740, and the cases of tardiness reported, 4,258.

Other hindrances might be discussed, such as the great number of classes, objection and indifference of parents, non-uniformity of text-books, and frequent changes of teachers. But enough has been said to reveal the magnitude of the work. It ought not to be necessary to argue the advantages of gradation to stimulate examiners to enter upon this work at once, and with such determination that their efforts will be crowned with success; yet it may not be amiss to mention some of the most important.

Classification and system will reduce the number of classes, increase the time of recitation, and thus permit better instruction. The average number of classes in the 74 schools to which I have called attention was 29.

Reports from 80 schools for the month ending December 15 gave the average number of classes as 22. This result can be traced directly to the influence of the board, aided by the "course of study," arranged by the Superintendent of Public Instruction.

Classification and system are absolutely necessary to good order and discipline, and I look upon them as the chief means of overcoming irregular attendance and tardiness. They also aid the pupils in the preparation of lessons, and at the same time teach them order and method so necessary to the business man.

One of the great advantages of gradation to the pupil is the check placed upon him in the selection of studies. It is a noticeable fact that most pupils in district schools select the studies pursued by them from inclination or prejudice, and not from ability to judge in such matters. The consequence is: their mental development is not uniform, and they at last take their places in society ill-prepared to assume the duties of citizenship.

How shall we accomplish gradation? The essentials are, first, a well arranged *simple* plan, worked out to details and accompanied by a graded course of instruction, grade-book, and necessary report-blanks; secondly, the hearty coöperation of boards of examiners, township inspectors, teachers, and parents. The first should be the work of the Superintendent of Public Instruction, otherwise uniformity will not prevail. To secure the second is properly the work of the boards of examiners.

To secure the coöperation of township inspectors, it will be necessary to explain the plan very fully, showing them its advantages, and just how they

are to be of assistance. This may be accomplished by personal interviews, by correspondence, and by holding occasional joint meetings of examiners and inspectors.

I would suggest that the county be divided into three districts to suit the convenience of examiners, and that each district be under the supervision of an examiner, who shall confer with the inspectors of that district, and attend the teachers' meetings noticed elsewhere. This arrangement will add much to the convenience of the inspectors.

To secure the coöperation of the teachers, show them that the school interest is a common one, and that they are the most important element in its machinery, and should feel a warm interest in the school-work of the county, as well as in their individual schools, no opportunity should be lost to impress the teachers with the idea that the schools of the county form one great school, held together by the same forces that operate in a village or graded school, and that they each have a primary department.

They should look to the township inspectors as principals whose duties are to aid and instruct the teachers, and to visit and report the condition of the schools to the board of examiners as superintendents. To confirm teachers in this view of the work, a system of monthly report blanks should be arranged by which the teachers can report directly to the Secretary of the Board of Examiners. In St. Joseph county, such a system of reports is now working quite satisfactorily. The reports are partly based on the Superintendent's course of study, which compels teachers to be somewhat acquainted with it.

As a further aid in this work, a strong effort should be made in those counties where three terms of school are held each year to have the schools open on the same date, and thus give examiners a better opportunty to assist inexperienced teachers in laying out their work.

In the absence of legislation requiring gradation, it would be impracticable to attempt a classification which would radically and suddenly change the present workings of our schools, as that would defeat the aim entirely. The work should be begun in the lower classes, which should be classified and held closely to the work. The older and more irregular element must be ignored to considerable extent. That element will disappear after a time, and the classified classes grow into its place. Just here will be shown the teacher's influence and executive force. Not only must this work be clearly explained to the pupils, but the parents must be won over to a hearty support of the teacher's efforts.

Too much importanee cannot be attached to the fact that in the lower classes lies our hope. If the teacher fully realizes that the school is an object of growth, and properly handles the lower classes, gradation is but a question of time.

No matter how excellent the plan or how perfect the machinery for carrying forward the educational interests of the State, failure is sure unless the teachers are skillful. I would, therefore, suggest that examiners should aim to promote the efficiency of teachers by aiding them to attain skill in school management, and by assisting them in becoming acquainted with the principles and methods of teaching. To aid teachers in this direction, examiners should cultivate a personal acquaintance and most friendly relations with them. Show them by your manner and personal attention that you have a deep interest in their success; that your interests are common; and that it does not delight you to deprive them of situations. Talk and correspond with them about their work. Encourage them to lay before you their difficulties, and to

ask you for suggestions. Look out for them, and call their attention to the many inexpensive devices that may be easily prepared and profitably used in illustration of many subjects. This will necessitate some labor on the part of the Secretary of the Board, but it will be more than compensated by the satisfaction of seeing the teachers brighten up with enthusiasm.

It should be the aim of examiners to establish written examinations in all the district schools, and to have samples of the pupils' work on exhibition in the Secretary's office. It will be necessary to give the teachers a little instruction in the preparation of such work, but they very quickly catch the idea and enter into the work with spirit.

The holding of township teachers' meetings under the supervision of the examiners, is worthy of most thoughtful consideration. I am thoroughly satisfied from testimony and experience that such meetings are of great benefit to teachers. As numbers decrease, the freedom of conversation increases, and the inexperienced teacher is led to speak freely of his difficulties and his methods. If the meeting is held near the centre of the township, classes from adjoining districts may be assembled and actual classwork be given.

The county institute is now a recognized factor in our school system, and it should be the aim of examiners to increase its usefulness by persuading teachers to attend its sessions. This can be accomplished by offering a percentage, in examinations, for attendance.

As a suggestion, merely, I would state that the Board of Examiners of St. Joseph county offered for attendance at the last institute a percentage not to exceed five per cent upon each subject presented by the instructors, to be based upon the notes taken by teachers and submitted at the close of the institute. The results were most satisfactory, both in attendance and the character of the work done by the teachers.

In conclusion, permit me to repeat, that it should be the aim of examiners to guard zealously the interests of the schools and society by refusing to license unqualified teachers; to labor diligently and earnestly to develop and perfect the school system of the State; to promote the efficiency of the teachers by example and precept, that our children may be fitted in the shortest possible time to assume the active duties of life.

After the reading of Mr. Howell's paper, a discussion of a general character upon the various points presented in the paper was engaged in by several members of the convention.

Previous to adjournment, the Superintendent of Public Instruction offered some closing remarks, in which he took occasion to congratulate the convention upon the successful accomplishment of the purpose for which the meeting was called. He also called attention to the social reunion of examiners and teachers to be held in the evening, under the auspices of the State Teachers' Association, at which exhibits of school work, plans of school-houses, microscopes with objects in view, etc., would be made. An invitation was extended to the members of the convention to remain during the two succeeding days and to participate in the proceedings of the State Teachers' Association, after which the meeting adjourned.

TRANSACTIONS

OF THE

MICHIGAN STATE TEACHERS' ASSOCIATION

AT THE

THIRTY-SECOND ANNUAL MEETING,

Held at Lansing, Dec. 27, 28, and 29, 1882.

STATE TEACHERS' ASSOCIATION.

TRANSACTIONS OF THE THIRTY-SECOND ANNUAL MEETING.

Lansing, Wednesday Evening, Dec. 27, 1882.

OPENING SESSION.

A large audience assembled in Representative Hall at 8 o'clock to examine the exhibit of school work and microscopes, which was arranged in the committee rooms adjoining the Hall. The committee in charge consisted of Superintendents E. B. Fairfield, Jr., Grand Haven, and E. P. Church, Greenville. The following is the schedule of the exhibits:

CLASS I.—PUBLIC SCHOOLS.

Albion. Supt. E. C. Thompson.

Drawings executed by high school pupils, illustrating work done in literature, physiology, and general history; houses of Scott, Bayard Taylor, Whittier, O. W. Holmes; tombs of Scott and Chaucer; heads of Scott, Caesar, Charlemagne, Plato, and Socrates; cuts of teeth, circulatory system, bones, and lungs; analysis of sentences by diagrams on the plan of Reed and Kellogg.

Centerville. Supt. Webster Dock.

Specimens of written examinations in geography, language, spelling, arithmetic, United States history, and reading from grades 7 and 8.

Charlotte. Supt. M. Louise Jones.

Specimens of written work in language from grades 1, 2, 3, 4, and 8; map-drawing from grades 5 and 6; physiology from grade 9; zoölogy from grade 10.

Concord. Supt. E. P. Holbrook.

Examination papers in algebra and book-keeping from high school; grammar diagrams from grammar department; map-drawing and original arithmetic from intermediate department.

Constantine. Supt. J. R. Miller.

Written examinations in arithmetic, geography, grammar, general history, geometry, and Latin. These papers represented all grades from 3 to 12 inclusive.

Detroit. Supt. J. M. B. Sill.

Twenty-six outline maps from memory; thirty packages of map-drawing on paper; eighty packages of specimens of general school work. These packages were not itemized or the grades from which the work came designated.

Grand Rapids. Supt. A. J. Daniels.

Microscopical drawings, border designs, and two packages of ordinary school work from the school of I. N. Mitchell; two packages of conventional designs and one package of border designs, original work, from the school of S. G. Milner.

Greenville. Supt. E. P. Church.

One book letters, grade 2; 2 books spelling, 1 book language, 2 books geography, grades 3 and 4; 1 book arithmetic, grades 5 and 6; 1 book business letters, grades 7 and 8; 1 book arithmetic, 14 books drawings, grade 8; 2 books grammar, 1 book arithmetic, 7 books maps, grade 9; 1 book United States history, grade 10; 1 book zoölogy, 1 book general history, grade 11; 1 book philosophy, 1 book astronomy, 1 book algebra, 1 book French, 1 book and 6 charts political economy; grade 12.

Ionia. Supt. J. W. Ewing.

Kindergarten work,—1 piece geometrical paper folding; 1 piece botanical sewing; 5 pieces inventive sewing; 6 inventive geometrical cuttings; 6 charts of sewing lessons from life; 1 map of Michigan, sewed; 6 charts weaving; 1 inventive paper pasting; 1 chart paper folding; 1 chart inventive drawing. General school work,—7 books geometrical drawings; 12 book-keeping sets; 7 botanical herbariums; 1 school paper from grades 5 and 6; 1 set general examination papers.

Stanton. Supt. Miss J. A. Drury.

Six outline maps, drawn in colors and to a given scale; 1 specimen of kindergarten work; several sets general examination work.

St. Joseph. Supt. C. W. French.

Specimens of etching with silk, done by pupils from 5 to 7 years of age.

Three Rivers. Supt. D. Howell.

Geometrical drawings, 5 books; philosophy drawings, 5 books; arithmetic examinations, 2 books, grades 9 and 10; spelling, 3 books, grades 6, 7, 8; language, 3 books, grades 7, 8, 9; geology, 1 book, grade 12; algebra, 1 book, grade 10; rhetoric and proof-reading, 2 books, grade 10; map-drawing, 2 books, grades 5, 6, 9; botany, 1 book grade 11; grammar diagrams, 2 books, grades 9, 10, 11; mechanical drawings, 5 cards,

Traverse City. Supt. S. G. Burkhead.

Specimens in map-drawing, penmanship, picture-drawing, and sets of written examinations, from various grades, showing general school work.

CLASS II.—COLLEGES, ETC.

Agricultural College.

The exhibit from this college consisted mainly of compound microscopes and slides prepared by students in the chemical, botanical, and natural history departments. Sixteen instruments were shown, including stands from the most famous manufacturers of America and Europe. Dr. W. J. Beal, of the botanical department, exhibited 1 vol. essays by freshmen; 1 vol. drawings and notes on vegetable physiology by seniors; 1 vol. of same by special students.

State Normal School.

This exhibit consisted of the following philosophical apparatus, constructed wholly by students under the supervision of Prof. Louis McLouth: Sonometer; mechanical powers; reflector and refractor; projectile machine; glass pump; simple pendulum; compound pendulum; organ pipe; centrifugal railway; electric battery; telegrahic instruments.

University of Michigan.

The University was represented by the departments of engineering and pedagogy. The department of engineering furnished numerous examples of student-work in forging, lathe-work, pattern-work, casting, chipping and filing, and carpenter work.

Students in the teachers' course presented the following: Astatic galvanometer, simple thermo-electric pairs, inertia apparatus, reaction wheel, support for glass tubes, etc., dissected Leyden jar.

Mayhew Business College.

Specimens of student-work were shown, consisting of day-book, sales-book, cash-book, journal and journal day-book, ledger, check-book, and bank deposit book. This work was on the same general plan as the exhibit of this college at the centennial exhibition, now in the State Library.

CLASS III.—MISCELLANEOUS.

Plans for School Buildings.

Mr. Julius Hess, of Detroit, exhibited plan and perspective view of a one-room school building, also the same of a two-room building. Mr. William Appleyard, of Lansing, exhibited one set of plans for a brick school-house and one set for a frame building. Both of these gentlemen read papers before the Association, fully explaining the plans presented. Mr. A. Langdon, of Minnesota, submitted plans for frame school buildings.

Microscopes and Accessories.

Prof. N. A. Richards, St. Louis, exhibited 1 "Acme" microscope, No. 3, by Queen & Co., with 1¼ in., ⅔ in., and 3-10 in. objectives made by John Sidel; 2 eye-pieces, revolving stage, camera, etc.; also mounts illustrating both vegetable and animal physiology. Prof. Wesley Sears, Mt. Clemens, exhibited a binocular "National" microscope, by R. & J. Beck, 1 section-cutter, 1 section knife, 1 turn-table, 1 frog plate, 1 life slide, 1 dozen animal tissue objects, and ½ dozen vegetable tissue objects.

Thursday Morning, December 28, 1882.

MORNING SESSION.

The Association was called to order by the President at 9½ o'clock, and the session opened with devotional exercises conducted by J. W. Ewing.

Telegrams of congratulations from the State associations of Iowa, Kansas, Wisconsin, and Illinois, were next read, and the Secretary was instructed to send suitable replies.

The reading of the President's address followed, after which the Hon. Ira Mayhew read a paper *in memoriam* of "Father Pierce;" W. S. Perry, of Zelotes Truesdel; and J. W. Ewing, of T. C. Garner.

Before declaring a recess, the President announced the following committees: On nominations—Messrs. Edward Olney, M. T. Gass, G. P. Glenn, H. C. Rankin, and Hamilton King; on resolutions—Misses M. L. Jones, Julia Dibble, Julia A. King, and Messrs. C. L. Bemis and G. R. Malone.

The next paper was given by J. S. Crombie, his subject being: "The Need of Visible Illustration, and the Proper Use of Apparatus."

This paper was discussed by Messrs. A. J. Cook, C. K. Wead, M. M. Marble, and Lewis McLouth.

AFTERNOON SESSION.

The afternoon session opened with a paper by Julius Hess on "Plans for Country School-houses."

This paper was discussed at considerable length by Wm. Appleyard and A. J. Daniels.

The President next introduced the Hon. C. W. Garfield, who spoke extemporaneously for an hour upon the subject of "Ornamenting School Grounds." Mr. Garfield was followed in discussion of the same subject by F. S. Fitch, Jr.

At the close of the discussion Supt. Sill, of Detroit, offered the following resolution, which was unanimously adopted:

"*Resolved*, That the Secretary of this Association be instructed to communicate with the Executive Committee of the National Teachers' Association, and to suggest the city of Detroit as a suitable and accessible place of meeting, and to express the earnest hope of the Michigan teachers that the decision of the committee may be favorable to the City of the Straits."

The hour of adjournment not having arrived, the President anticipated the exercises of Friday by calling for the report of the committee appointed at the last meeting of the Association, to visit and examine the Kalamazoo departmental school. The committee, through its chairman, J. M. B. Sill, made the following report:

To the Michigan State Teachers' Association:

Having had little opportunity for consultation with Superintendents Thomas and French, my fellow members of the special committee appointed to report upon departmental graded schools, I herewith present my individual views upon the subject and shall leave the gentlemen named above to sustain my conclusions or to take issue with them as they may see fit.

As I understand the report of Professor George, made at the meeting of 1879 upon this subject, he sought to remedy certain evils and disadvantages of the graded system, of which the following were the principal ones: He objected, very justly, to the tendency of the system towards undue rigidity in compelling pupils who are obliged to be absent from school some portion of the year to go back over all their work, because of the omission of some small portion of it. This he regarded as unjust and deplorably discouraging to the pupil. My observation of the departmental school in Kalamazoo does not convince me that it offers a remedy for this difficulty. The departmental portion of this school takes pupils through nearly seven years of work, and in each branch of study there are nine classes or divisions, hence the average interval between two divisions, say in arithmetic, is more than two-thirds of a year, or considerably greater than it is in many other graded schools of the State.

Another objection to the graded system, which he set forth powerfully and tellingly, was its tendency to bind pupils with an "iron net-work of classification," which gives no latitude to their individual tastes and especial adaptations. He says: "Nowhere in nature or in life is there a parallel to this; it is limited to the primary schools alone;" and again: "No genius in language should be repressed or impeded because of slowness in arithmetic; no dolt in arithmetic should be hurried beyond his depth,—and so kept a dolt,—because bright in other studies; but in all departments pupils should be classified according to their several abilities. In other words, they should be classified as God classifies them, and as men will classify them after they leave school."

Whatever my views may have been at the time this report was read I am now convinced that there is some justice in this arraignment, and that while in most graded schools pupils are encouraged to follow the bent of their tastes in special directions, the tendency of the system itself is towards an unnatural and unwholesome uniformity. Therefore, I should hail with great joy any efficient remedy for the state of things thus described, but I cannot see that the Kalamazoo plan is an efficient remedy. The difficulty that I have previously mentioned again stands in the way. True, there is no clashing of classes interfering with the progress of the boy or girl who is able to do work in advance of his class in any one or more branches of study, but the average interval of two-thirds of a school year is an almost insuperable barrier to such advance. As a matter of fact the classes hold together in the Kalamazoo school with very nearly the same persistence that characterizes the majority of graded schools. At least such was my observation and, if I understood her aright, such was the testimony of the very efficient principal of the school. Indeed, it seems to me, the fact that the pupil is in the presence and under the special guidance of his teacher, say in arithmetic, only during the brief recitation time (25 minutes daily) makes the difficulty of bridging the wide chasm between classes far more considerable than it would otherwise be.

In his report to which reference has been made, Professor George pointed out the great benefits that would result from the proper division of labor among teachers, which is a conspicuous feature in the departmental plan. He says in effect, let the teacher who is successful in arithmetic, and who inspires her pupils with a love of this branch of study, take it in charge and direct all her ingenuity, enthusiasm, and industry to it; and so with the other departments of school-work. With this thought I have full sympathy, and it gives me great pleasure to say that I consider the Kalamazoo school a success. I know it is objected that specializing will tend to the narrowing and cramping of teachers. I do not fear this result, and even if it were to be feared, the schools are for the children and not for the teachers. There is in my judgment enough to be learned about any one branch of study and about the methods of presenting it to fill the time and heart of any earnest teacher. I am not here to praise or to condemn the work in instruction which I found in the school to which our attention is directed to-day, but I go out of my way for this once to say emphatically that I found it, on the whole, excellent. Observation of it fortified me in my growing belief that, except in the youngest primary schools, where intelligent motherliness, tact, and great love and respect for childhood are the crowning qualifications of the truly successful teacher, specialization in instruction, and a judicious division of labor are most desirable in our public schools.

Upon the school-house under consideration as a thoroughly convenient place for school work, I am obliged to offer one or two criticisms. This would be unnecessary except that the report to which I have referred condemns the ordinary plan on which school-houses have been built, and plainly indicates that school architecture must be radically reformed before the benefits of the departmental plan can be secured. I object to the plan of seating several hundred pupils, very various in age and in the power of self-restraint in a single room and under the charge of one teacher. The objections to such an arrangement will, I believe, be obvious to every member of this Association. The strain upon the teacher in charge is something terrific, and I believe few ladies can long endure it. In the future, as in the past, this difficulty will doubtless present itself to the school authorities of Kalamazoo. I object to this plan also because it will always require the best energies of the strongest teacher that such a school affords to hold a mixed assembly like this in good order and industry. The discipline of such a school is effected under what seems to me most palpable disadvantages and is maintained at the cost of a most excellent teacher whose energies could be far more profitably employed in instruction. It is true that only about one-half of the whole number of pupils are sitting in the assembly room during school hours, the remainder being engaged in recitation, but to merely maintain good order and industry in a room containing even 120 or 130 pupils, of widely different grades, changing once every 25 minutes is all that the ablest teacher ought to be expected to do, and practically it is almost the utmost that is possible. A room large enough to contain comfortably 200 or 300 pupils makes it almost impossible for many of the pupils to read from the blackboards any outlines of work which teachers so generally desire to give, without serious danger of injury to their eyes.

The question of the economy of employing the time of one teacher almost wholly upon the maintenance of order in a school of two hundred pupils is not perhaps so important as some of the others, but it will undoubtedly be discussed before many districts will adopt the plan under consideration.

If I were called upon to indicate the worst and most pernicious tendency of the graded system, I should put before those mentioned by Professor George in his report one which may be formulated as follows: A tendency to produce a decadence of real teaching and to transform teachers into mere recitation hearers. I say the tendency of the system is in this direction. Usually twice as many pupils as one teacher ought to undertake to instruct are placed under her charge. Recitation follows recitation throughout the school-day. The teacher soon finds that she can do little more in the brief time allotted to recitation than to find out what her pupils have done at their seats, and she cannot be disturbed in this process of testing by calls for help and guidance from the pupils who are engaged in study. Thus, in a large and busy school, real teaching seems to be crowded out of its place, and the power to instruct decays from disuse. It seems to me that the Kalamazoo plan, by its strict isolation of the teacher from the pupil, except during actual recitation, aggravates this evil, which seems to increase in the graded system. But is there not a remedy for this in breaking down the sharp line that it is so common to draw between study and recitation? Children hardly know how to study; they are prone to learn only words; they misapply their energy in doing the things that they ought not to do, and they leave undone the things that ought to be done. They need intelligent guidance at every step, and only the teacher can give this guidance.

Let all the time that can be spared for both preparation and recitation, say in geography, be put into one period, and let the teacher, during geography hour, be with and among her pupils. Let her test such of her pupils as need testing, but let her not insist upon aligning 20 or 30 other pupils as weary witnesses in her work of testing. During the progress of each term, let her forget her lines of grading but give an open road for ever so much progress, and plenty of encouragement to each pupil to advance upon that road. At the end of each term let the status as to the grade of each pupil be determined and let him go on from the point which he has reached in each branch of study. But how shall the clashing of classes be avoided, and how shall we secure a proper division of labor among the teachers, such a division as will allow each to instruct in those branches only in which she is most successful? Why not apportion the work upon each floor in something like the following manner? Group the school-rooms into divisions of three or four each; let each teacher have the general oversight of her own room and instruct her pupils in certain more general and unclassifiable branches. Then divide the remaining time into, say four parts, properly apportioned between the four principal topics of study. Then there would be a time for geography, for arithmetic, for language, and for reading and spelling. Now average the work so that the teacher of arithmetic can give instruction in this branch in each of the four rooms which have been grouped together, and let the same course be taken in each of the other branches named above. Under such circumstances no clashing would be possible. A boy whose average of progress would place him in the fourth grade would find the fifth grade class in arithmetic open to him and nothing in the way of his entry to it. Would not such a schedule meet the wants of those who desire to work upon the departmental plan and avoid some of the difficulties which I have mentioned? It does not require buildings differing from the ordinary type. It does not mass great numbers of pupils of widely different ages in a single room. It does not place pupils inconveniently distant from blackboards and imperil their eyes in trying to read what teachers have written. It does not diminish the real teaching force of the school by directing the chief energies of presumably the strongest teacher in the corps to the maintenance of order. It does not isolate teachers from their pupils except during a meagre fraction of the school-day, and it puts upon no one such a tremendous strain as must be endured by the teacher in charge of the large assembly room, which is a feature of the Kalamazoo plan.

Respectfully submitted,

J. M. B. SILL,
Chairman.

Evening Session.

A large audience assembled at 8 o'clock to listen to an address by Rev. J. Morgan Smith of Grand Rapids; but, through a misunderstanding, Mr. Smith failed to appear, and the time was devoted to the consideration of the next topic on the program—"Science in Primary Schools,"—by H. R. Pattengill.

Friday, December 29, 1882.

Morning Session.

The devotional exercises, on assembling, were conducted by E. P. Church.

After giving some notices the President announced the discussion of the paper read the previous evening—"Science in Primary Schools,"—which was opened by E. A. Strong.

By permission of the President, Mrs. H. Hunt, of Boston, addressed the Association on the subject of temperance. At the close of Mrs. Hunt's

remarks, Mr. Walbridge offered the following resolution which was adopted unanimously:

Resolved, That we, the members of the Michigan State Teachers' Association, most heartily endorse the petition to the Legislature, soon to be in session, to enact a law requiring the physiological action of alcoholic beverages to be taught in all schools supported by State money under State control.

Permission was also granted to Mr. Swan to explain the objects of the Lansing Teachers' Bureau.

The paper on "From County Institute to County Normal" was read by J. G. Plowman, of White Pigeon. This paper was discussed at great length by Messrs. S. G. Burkhead, Clark, Collins, Ewing, Cornell, and Bennett.

Afternoon Session.

Upon the reassembling of the Association, the discussion upon Mr. Plowman's paper was continued by Messrs. Haskins, Pattengill, Clark, Woods, M. T. Gass, Church, Goodman, Walbridge, and Plowman.

At the close of the discussion, Mr. Walbridge moved that a committee of three persons be selected to consider the question of change of system of county institute work, and report at the next regular meeting.

The motion was carried and Messrs. J. G. Plowman, H. R. Pattengill, and Z. C. Spencer, were selected as such committee.

Prof. V. M. Spalding, who was to read a paper on "The Microscope in our Public Schools," being absent, his paper was read by President Beal. No discussion followed.

On motion of D. Howell, the executive committee was instructed to consider and audit without delay the bills for printing which should be presented by the Superintendent of Public Instruction.

The Superintendent of Public Instruction was requested to have printed two copies of the proceedings of the Association for each member.

The committee on resolutions reported the following which were received and adopted:

Resolutions.

Resolved, 1. That this Association tender its thanks to the citizens of Lansing who have so graciously and kindly entertained its members, to the hotels and railroads for their liberal reduction of rates, and to the State officers who have opened to us these pleasant commodious rooms.

2. That the hearty thanks of this Association are due and are hereby tendered to Dr. Beal for his vigorous and effective administration.

3. That we recommend all teachers of graded and ungraded schools to observe Arbor-day by ornamenting their school grounds with trees or shrubs.

4. That this Association, learning with pleasure of the honor conferred upon State Superintendent V. B. Cochran, in his appointment to the office of Register of the U. S. Land Office at Marquette, desires to express the hope that he will not consider it his duty to deprive the educational interests of this State of his wise counsels and excellent supervision.

The Superintendent of Public Instruction submitted the following, which was adopted:

Whereas, In the month of August last there was organized a National Educational Committee, with the object of supplementing the efforts already making to bring to the attention of Congress the advisability of appropriating money from the National Treasury in aid of education, to be distributed among the states and territories on the basis of illiteracy; therefore

Resolved, That we, members of the Michigan State Teachers' Association, do

hereby express our hearty and earnest approval of the purpose of the National Educational Committee, and do, respectfully but with what emphasis we may, urge upon Congress the importance of appropriating annually for the aid of education among the masses such a sum, and the continuance of such appropriation for such a number of years, as shall in the judgment of the committee and Congress seem best.

Superintendent Cochran made the statement, that he should likely resign the office of Superintendent of Public Instruction for reasons not yet fully developed, and asked that the Association recommend some person to the Governor with the request that he receive the appointment in case a vacancy should occur. On motion of Mr. Howell, the matter was referred to the executive committee.

The committee on nominations recommended the following persons, who were duly elected, as officers of the association for the ensuing year:

President—J. Estabrook, Olivet.

First Vice President—A. J. Daniels, Grand Rapids.

Second Vice President—O. C. Seelye, Owosso.

Secretary—H. R. Pattengill, Ithaca.

Treasurer—S. G. Burkhead, Grand Traverse.

Executive Committee—For three years, C. F. R. Bellows, Ypsilanti; Z. C. Spencer, Battle Creek; Henry B. Baker, Lansing. To fill vacancy, Miss M. M. L. Jones, Charlotte.

No further business appearing, the Association adjourned.

W. J. BEAL, *President.*

D. HOWELL, *Secretary.*

REPORT OF THE TREASURER.

DEBIT.

1881.				
Dec. 29.	To balance on hand		$82 35	
1882.				
Dec. 29.	To annual dues		145 20	
				$227 55

CREDIT.

1882.				
Dec. 29.	By cash to	W. J. Beal	$35 70	
"	"	D. Howell	10 84	
"	"	W. S. George & Co.	47 39	
"	"	Wesley Emery	1 25	
"	"	on hand	132 37	
				$227 55

Respectfully submitted,

H. R. GASS, *Treasurer.*

LIST OF MEMBERS, 1882.

T. C. Abbot, Lansing.
Miss Laura Abbe, Benton Harbor.
Miss Laura Adams, Bradford, Pa.
J. M. Barr, Galesburg.
J. J. Bronson, Berrien Springs.
W. H. Butts, Orchard Lake.
W. W. Beman, Ann Arbor.
C. L. Bemis, Portland.
B. F. Bailey, North Adams.
F. A. Barbour, Coldwater.
W. J. Baxter, Jonesville.
E. L. Briggs, Eaton Rapids.
C. F. R. Bellows, Ypsilanti.
G. A. Brown, Brighton.
W. J. Beal, Lansing.
S. G. Burkhead, Traverse City.
S. F. Baker, Ovid.
Dwight Backus, Grand Ledge.
Silas Bigelow, Kalamazoo.
H. P. Bartlett, Lansing.
A. H. Bennett, Bangor.
George Barnes, Howell.
Miss Effie Beech, Mason.
Miss Clara M. Bloomburg, Grand Ledge.
Henry B. Baker, Lansing.
Webster Cook, Manistee.
J. S. Crombie, Big Rapids.
Miss Hattie E. Cooley, De Witt.
W. M. Clark, Lansing.
J. Cupples, Paw Paw.
Carrie Cupples, Mendon.
E. P. Church, Greenville.
E. A. Carpenter, Caledonia.
A. E. Curtis, Adrian.
Mrs. Georgiana Carman, Ann Arbor.
Miss Arletta Camburn, Albion.
Chas. H. Cole, Saline.
C. G. Chaffee, Flint.
George N. Carman, Union City.
Calvin B. Cady, Ann Arbor.
Theodore F. Casamer, Zilwaukee.
T. S. Clark, Rose.
J. C. Chilton, Detroit.
P. D. Cornell, Northport.
C. A. Cook, Dexter.
Nathan P. Collins, Homer.
Benjamin L. D'Ooge, Ann Arbor.
Julia A. Dibble, Kalamazoo.
Mrs. J. M. Dilts, Ovid.
Webster Dock, Centerville.
A. J. Daniels, Grand Rapids.
H. F. Derr, Mason.
Florence L. Elms, Kalkaska.
J. F. Ewing, Petoskey.
J. W. Ewing, Ionia.
Geo. J. Edgcombe, Deerfield.
Henry M. Enos, Cadillac.
F. S. Fitch, Pontiac.
Chas. W. French, St. Joseph.
Miss Ada L. Fisher, Olivet.
Henry N. French, Kalamazoo.
E. B. Fairfield, Jr., Grand Haven.
C. A. Gower, Lansing.
M. T. Gass, Flint.
H. R. Gass, Jonesville.
J. S. Goodman, East Saginaw.
L. G. Gorton, Detroit.
Wm. B. Gregory, St. Ignace.
Austin George, Ypsilanti.
G. P. Glenn, Marshall.
Miss Millie Graham, Athens.
E. L. Griffith, Bancroft.
D. A. Hammond, Tecumseh.
W. N. Hailmann, Detroit.
Miss Linna A. Huston, Webberville.
Clark B. Hall, Hastings.
Mrs. Josephine A. Hart, Williamston.
D. Howell, Three Rivers.
David E. Haskins, Concord.
Martin Hanlon, Williamston.
L. C. Hull, Detroit.
J. G. Johnston, Three Oaks.
Miss M. Louise Jones, Charlotte.
Miss Hester P. Jenks, Sand Beach.
A. E. Jennings, Lawrence.
Chas. Jenkin, Mason.
Sam'l Johnson, Lansing.
James F. Jordan, Buchanan.
Hamilton King, Olivet.
Miss Julia A. King, Ypsilanti.
Miss Mary E. Kessler, Vassar.
Eugene Kidney, Lyons.
J. B. Laflin, Dundee.
Miss Burdella Lobdelle, Greenville.
Willis H. Leisenring, Dimondale.
Miss H. L. Lane, Webberville.
U. W. Lawton, Jackson.
Miss A. Lovell, Grand Rapids.
James E. Lutz, Brockway Center.
Charles J. Monroe, South Haven.
E. J. MacEwan, Lansing.
Eugene Miller, Grass Lake.
Miss Jennie Mount, Union City.
Miss Lois McMahon, Jonesville.
Frank Millis, Almont.
Milton M. Marble, Ypsilanti.
Pauline McPherson, Ionia.
Lewis McLouth, Ypsilanti.
Mrs. M. E. Malsie, Grand Haven.
J. B. Millard, Belding.
Ira Mayhew, Detroit.
Ephraim Marble, Marshall.
C. F. Newkirk, South Lyon.
Miss Ella M. Nethaway, Ovid.
E. Olney, Ann Arbor.
G. A. Osinga, Cassopolis.
Miss Carrie E. Phillips, Rochester.
J. G. Plowman, White Pigeon.
M. Pemberton, Vandalia.
Charles E. Palmerlee, Dryden.
E. M. Plunkett, Vernon.
David C. Pierce, Brooklyn.
Miss Abbie Pearce, Grand Haven.
Miss Belle Phillips, Onondaga.
Frank W. Phillips, Chicago.
P. M. Parker, Chelsea.
W. S. Perry, Ann Arbor.
Miss Anna A. Paton, Almont.

H. R. Pattengill, Ithaca.
H. C. Rankin, Leslie.
Miss Sara J. Russell, Detroit.
Isaac Roose, Jackson.
N. A. Richards, St. Louis,
Miss Minnie Ridgeway, St. Joseph.
Miss Jennie Rowe, Union City.
M. F. Scott, Chicago.
W. L. Swan, Lansing.
Z. C. Spencer, Battle Creek.
Miss Ida A. Shotwell, Concord.
E. A. Strong, Grand Rapids.
Mrs. Z. C. Spencer, Battle Creek.
J. M. B. Sill, Detroit.
Clark Stanton, Holly.
Wesley Sears, Mount Clemens.
D. S. Stephens, Adrian.
Erwin F. Smith, Lansing.
W. L. Smith, Lansing.
Miss M. A. Tibbits, Manistee.
Delia Thomas, Palo.
Elizabeth B. Tibbits, Leslie.
Frank N. Turner, Essexville.
E. C. Thompson, Albion.
O. D. Thompson, Romeo.
Annie Tubbs, Mason.
Ella E. Taber, Kalkaska.
Joseph P. Vroman, Ypsilanti.
J. D. Williams, Chicago.
Charles K. Wead, Ann Arbor.
W. W. Weeks, Dansville.
W. A. Waldron, Ada.
W. S. Webster, Benton Harbor.
William B. Woods, Hadley.
H. K. Warren, Mt. Pleasant.
W. E. Watt, Howard City.
T. C. Williams, Rochester.
Miss Lillian E. Wilcox, Adrian.
W. H. Wieand, Bronson.
Geo. C. Wheeler, Petersburg.
N. H. Walbridge, Grand Rapids.

PRESIDENT'S ADDRESS.

WORK FOR OUR ASSOCIATION.

BY W. J. BEAL.

FELLOW TEACHERS:—Another year has brought us to the midst of the holidays, near the close of 1882, and finds us again greeting each other in the Capitol, in the city of conventions. Here, from year to year comes the faithful teacher who is striving to reach the best methods, by gaining strength and enthusiasm for his future work. In doing this, it requires some resolution to spend money, and time, also, which is generally needed for rest, visiting friends or accomplishing some piece of work long delayed.

Year by year, some of the old familiar faces disappear from our gatherings. They have engaged in discussing some topics till they seem old and threadbare. To a great extent, this discussion of old topics seems necessary for the benefit of the new recruits who are constantly entering the ranks of the teacher's profession. Most of what I have to say at this time is intended for the younger portion of our members.

During 1876, the centennial year, Prof. Daniel Putnam of the State Normal School, in accordance with a previous resolution, prepared "A Sketch of the History of the Michigan State Teachers' Association." This is a valuable pamphlet to which I call especial attention. Every teacher should have one, as it shows what the Association has done, as well as some things which it has not done. The first annual meeting was held in Ypsilanti, in 1852, thirty years ago the fifth day of last October. "From the very beginning," we are told, the Association kept constantly in view and frequently advocated that equal educational rights and privileges should be secured for all the people of the State, without regard to color, condition or sex. These rights have been secured throughout the State, if we may except the fact that no dormitory has been built for the accommodation of women at the Agricultural College. Even at the latter place, they are granted all other privileges which are granted to other students. During this period, women have been admittted to many colleges in other States, and it is only a question of time when they will be admitted to all first-class colleges in the United States.

The Association warmly advocated "that the 'rate-bill' system in our common schools ought to be abolished." It has been abolished, and probably our common schools will be free as long as Michigan remains a State. We are also glad to be able to say that education is practically or nearly free in our higher institutions of learning, even up to the University.

The Association began and continued for some time to agitate the impor-

tance of the office of County Superintendent of Schools. A law was passed to this effect, though it was not in the form desired by the Association. It failed to give satisfaction. People abandoned the plan for a time, but now happily they have succeeded in securing a better law which will doubtless give greater satisfaction to patrons and to teachers. Doubtless largely through the efforts of several hundred Granges in the State, farmers are taking greater interest in the common schools than ever before. They generally uphold the present system of examining teachers.

The only failure among the united attempts of the members of the Association was in not being able to successfully conduct an educational journal. It started in a time when all such enterprises met with indifferent success.

During the past thirty years, the mode of teaching English grammar has been very much changed; in many respects, changed for the better. There are still many things pertaining to this topic which are not yet well established. Some of our best minds can well afford to continue to investigate the subject of English grammar. It may well claim the attention of this Association. Much more attention should be given to the best methods of teaching students to write the English language neatly and correctly. A short exercise every day is none too much time to give the subject. Geography has been discussed and much progress has been made. Probably the Association has less to do in future in this topic than in grammar.

Compulsory education has frequently demanded the attention of our meetings. Probably the best we can do in this direction is to awaken an interest among school-boards and the public generally.

With the new and more rigid examination of teachers we shall soon have schools of a better grade. Good schools will tend to attract and hold dull scholars. There is nothing which will interest most dull pupils sooner than an examination of some objects, a flower or some other part of a plant, an animal, a mineral, or some manufactured article. An ingenious teacher can get such pupils to making some experiments or observations, and report the results. Some small animals can be dissected or parts of larger animals in the presence of small classes. A little something can be done in the rudiments of a technical education. Teachers may say what they will, there is discipline, culture, and real worth in the study of natural or artificial objects. Occasionally a little time can be given to making a collection in the school-room of articles which the children have made. A wide range can be given to these topics. It may include fancy work, drawings, picture frames, rustic work, toys made by pupils, minerals, any curiosity of almost any kind. These things will never fail to interest pupils. They are the best subjects about which to write short compositions. The world is full of interesting things worthy of study and experiment.

We have the University, to train persons for law, medicine, engineering, dentistry, politics, teaching, for general citizenship. The Normal School is especially intended to train teachers. The course at the Agricultural College is planned with reference to the wants of the farmer. It is true that the training there given is most, or all of it, valuable to people of any calling whatever; and students often enter the course for the purpose of getting this training without any reference to applying it in agriculture. There is a growing demand for all sorts of technical schools, and the time will soon come when such schools will be common in our State.

In this connection, permit me to notice an article in the October number of

The Century in reference to "Hand-work in Public Schools." The article was written by C. G. Leland, who is conducting a school in Philadelphia. Every Tuesday or Thursday afternoon sixty or seventy public school children, from ten to sixteen years of age, girls and boys, are engaged in different kinds of decorative work. They engage in modeling, painting, ornamental clay-ware, art needle-work, carving wood, drawing, in fact all the decorative arts, such as make a house beautiful. Mr. Leland concludes that in education decorative work must precede the practical, simply because it is easier. It has been demonstrated in the Philadelphia school that every child can learn not only to draw but to use tools; nay, to earn money while at school. But even if the children should never make any money by selling their wares, the education of their fingers and brains is worth all the time and money it costs. The present decay of the apprentice system is rapidly rendering industrial education in schools an absolute necessity. The education of the future will embrace hand-work at every stage, from the kindergarten upward. Mr. Leland continues by saying, "It is now no longer an experiment but a success, and I am happy to say that it is now generally regarded as such, and public interest in the school is rapidly increasing."

"It has been clearly demonstrated by this experiment that, if rooms and furniture can be provided, the work of the pupils could be sold to such advantage as to meet all other expenses. It cannot be said that hand-work is an additional tax on the brain, since it is accepted by the pupils as an amusement or relief. The progress of the work has been steady and promising. Such work is inevitably destined to form a part of all public school education."

It seems to me eminently proper that this subject occupy the attention of this Association. In this way we can command greater respect and win the sympathy of the laboring classes. We can hasten the teaching of hand-work and give shape to the new departure. The subject will add variety to our programs and broaden the mind of every teacher who attends our meetings.

Very great progress has been made in grading schools. That something is yet unsettled is obvious from the nature of a committee from which a report will be made at this meeting on the merits of the "Kalamazoo system." In this direction, the subject of a graded school for some of the townships may profitably require further attention. A start has already been made, showing that there is a demand for something of the kind.

The question of "uniformity of text-books" has been frequently and ably discussed. It may not be best to have a uniformity for the whole State, but it would be economy for pupils and teachers to have a uniformity in townships or counties. If we can aid in any way to reduce the cost of text-books to our pupils and not reduce the quality, we shall receive the gratitude of all who patronize the schools. With economic management, there is no reason why our text-books should not be afforded at a price much below that usually charged.

The question of "prizes in schools" has been before the Association. The tendency seems to be to discourage the awards of prizes. The "marking system" has also demanded some attention and may well receive more.

The tendency of the age is towards the abandonment of corporal punishment. Notwithstanding the decline of birch and blue-beech, the strap and the ferule order in our schools is generally better and far more wholesome than when secured by flogging and brute force. We are learning to pay more regard to the comforts of the body and to physical development, to warm clothing in winter, to proper ventilation and warming of school-rooms.

The school-houses in our cities are often very well heated and ventilated, but in the country school-house there is very little progress. Here is a great work yet to be done. How can we reach the persons who plan and build our country school-houses? Can not something be done through our county examiners? The officers of the school district are not here to-day. They are never present at these meetings.

Almost every man in a district thinks himself competent to plan a country school-house. In some way this subject should be reached; it will be reached.

Since writing the above, I am much gratified to know that our enterprising State Superintendent, V. B. Cochran, is taking measures to send out good plans and specifications for cheap and neat country school-houses all over our State. It is a grand work, and I know many neighborhoods where the people are just ready for his plans.

Our State Board of Health, especially through their sanitary conventions lately held in several parts of our State, are helping the condition of our schools.

The State Horticultural Society has already undertaken something in the way of ornamenting school grounds in the country. In connection with that society, we can aid in the construction and ventilation of school-houses. In many of the best portions of our State granges are abundant, and in some counties there is a county or Pomona grange. It is one of the objects of these county granges to consider the subject of advancing the country schools. We can reach the granges very easily through the *Grange Visitor* and through the meetings of the State Grange, annually held in this hall early in the month of December. United effort in a good cause should accomplish much. Let us secure the coöperation of the granges, the sanitary conventions, the county boards of examiners, the managers of teachers' institutes, the State Superintendent of Public Instruction, the State Horticultural Society, and the 30 or more county horticultural societies and a few farmers' clubs, and we shall take the country school-house by storm. We shall get a thermometer into every room, a fire built in a proper manner, and see that a good supply of fresh air will come from some other source than from an open door or an open window.

As members of the Association, we must continue to encourage and support the teachers' institutes; we must do all we can to see that good men are placed in the position to examine teachers for the common schools. Let us strive to raise the standard of the school teacher and make it impossible for any but competent persons to secure certificates. In no other way can we sooner raise teaching to a high profession. Any occupation takes rank according to the skill, the ability, and the culture of those who fill its ranks.

Besides the subjects mentioned, there is yet something to do in adjusting the relations of the high schools to the University; in considering the best modes of teaching natural science and the position these topics should occupy in the school curriculum. We must not lose sight of the moral and religious instruction in public schools.

If the State needs more normal schools, or other schools, for training teachers, here is the proper place to begin to agitate the subject and give the matter due form.

To increase the attendance in our meetings, we must have a varied program in which a great many people will be interested. If we deplore the absence of college men we must vary the program in a manner to compel them to attend. After a little, if the numbers increase, the Association might devote

a part of the week to meeting in sections. This has already been started, to some extent, in the meetings of the city superintendents and in the meeting of the county examiners. If rightly conducted, there is no doubt that a convention of the college men could be made profitable to all of them.

Several attempts have been made to encourage exhibits at our meetings, and one effort was made to secure a school exhibit at our State agricultural fair. In some other States school exhibits at fairs have been very successful. Shall this association abandon all future effort in this direction? Our county examiners could secure exhibits from the common schools at county fairs, if they cared to undertake the work in real earnest. This has been successfully accomplished in Ionia and perhaps in other counties. Previous attempts to have exhibits at our annual meetings have been so interesting that the executive committee, early in the present year, decided to urge superintendents and teachers to present something at this meeting.

A circular was widely circulated among the educators of the State and many letters were written. Among other things, the circular contained the following:

"A few would prefer a uniformity of topics for each grade throughout the State, while many believe that the greater the variety of topics and modes of exhibiting, the more instructive will be the exhibition to those attending the meeting of the Association. A great variety in an exhibition will make it easier for each teacher to see something valuable which he can imitate in his own school. Certificates should be furnished by Superintendents and Boards of Examiners, testifying that the work is done fairly.

"Through the exertions of the County Boards of Examiners, we hope to receive something from the common schools of the State. In addition to the ordinary methods of presenting pupils' work for exhibition, the following suggest themselves as perhaps adapted to some schools. The teacher can write a letter of inquiry to his pupils. This may be a business letter and should be somewhat complicated. A written answer may be required of the pupils, and this written answer exhibited. A plan of the school grounds, of some neighboring farm, or of some garden, can be drawn to a scale."

In looking back over the transactions of this Society for former years, I find a very great variety of topics have been discussed, and a great variety of modes have been followed in conducting the meetings. There appears to have been a commendable effort on the part of each president to introduce something new. As these presidents, with rare exceptions, have been changed yearly, and as they have apparently usually done most of the planning of programmes, we do not find much unity of purpose in carrying out what was undertaken by their predecessors. This mode of procedure has given us variety. For most of the time during the past ten years or more the executive committee seems to have been an honorary body—its members merely making suggestions by letter each year to the president for his new program. For some part of the time, no meetings of the executive committee have been called.

A report of an executive committee, in 1874, says: "During the last half dozen years there has been a growing impression that the Association is not accomplishing all that it ought to accomplish; that it is not exerting that influence which legitimately belongs to it, upon the educational institutions and character of the State; that it is not, as it ought to be, a grand educational force, helping largely to fashion public sentiment, and to direct public action."

Professor D. Putnam made an excellent report in 1874 as chairman of the executive committee. I find no mention of any report since that time, although our constitution says: "The committee shall keep a record of its proceedings, and shall report annually to the Association."

In the address of President H. S. Tarbell in 1875, he says: "Some change ought to be made in the executive committee. They should be responsible for the success of the meetings of the Association, and not the president." He also thought that some subordinate associations ought to be formed, which should be in a way connected with this.

It seems eminently proper that the president serve for one year only.

To help make new suggestions, and especially to help carry them out to completion, I think it quite important that the executive committee should come to the front and take a prominent part in the management of this Association. The constitution makes the president, *ex officio*, chairman of the executive committee. For most purposes, at least, I think it would be better for the committee to select a chairman from their own number. For real good work the committee is now too large by about one-half. There are objections to reducing the size.

I think the Association would be much more efficient, in every respect, if it had several standing committees to whom should be referred various matters brought before the society. More work could be done and it would be better done than at present. To make new committees at every meeting would take time, and the new men would not be prepared with well considered reports. Why not divide the present executive committee in several standing committees assigning each a topic to take in charge?

Permit me to welcome you all to this annual gathering of Michigan Teachers. We hope you will feel well repaid for the time and money expended in attending this convention. Our program is not crowded with topics, though we have a great work to perform. During the discussions we hope to have many short, pointed speeches instead of a few long ones.

IN MEMORIAM.

REV. J. D. PIERCE.

BY IRA MAYHEW.

[Before reading his paper relating to the services of Rev. John D. Pierce, Prof. Mayhew made the following preliminary remarks:]

I ask your indulgence while reading the paper I have prepared for this occasion, for I am not in my usual health, and may find it difficult to make myself understood. When the invitation came to me to take part in these memorial exercises, I at once consented to do so. But I have been continuously occupied in duties requiring immediate attention to the first of the present month, when I found myself confined at home some days, waiting for nature to repair a fractured rib, from which I have not yet fully recovered. It was while thus lying upon my couch, that I gave some thought to the duties of this hour. I have for many years been glad to meet with my fellow-teachers as I have been able. Fifty years ago I taught my first school. A number of teachers then met weekly to improve our methods of teaching, and near the close of our winter schools we held a school celebration, some eight or ten schools participating and filling a large church with delighted patrons and friends. Since that time I have met with teachers and fellow laborers in the cause of education from perhaps all the states, and have received encouragement and strength from such fellowship, as I expect to here. Besides this meeting has for me special signification, being a semi-centennial memorial of my entrance upon the profession of teaching, to which my life has been chiefly devoted.

Observant and reflective persons, whether looking upon the meadows in the spring time as they put on anew their carpets of green, observing the swelling buds, the opening flowers and the renewal of vegetable growth in all their pleasing variety, ministering to the comfort of the animal creation, considering the wisdom and beneficence of the succession of day and night, and the changing of the seasons, providing for periods of labor and repose so admirably adapted to the wants of man, or going forth by night and beholding the heavens which declare the glory of God and show forth his handiwork, must be thankful for that Providence which has given us one sacred holiday in seven for the rest of the body and the culture of the mind and heart, that we may become more and more like Him in whose image man was created. In the autumn, when the maturing harvests and the golden fruitage of the year are gathered in, what can be more appropriate and befitting than our annual thanksgiving to Him from whom cometh every good and perfect gift. When we consider the many and varied blessings that come to us as a country from civil and religious liberty, no wonder that the birthday of the Republic should

everywhere be celebrated with great enthusiasm by a liberty-loving people, and no wonder that the birthday of the Father of our country, first in war, first in peace, and first in the hearts of his countrymen, should be so celebrated. When the integrity of this great and prosperous country was threatened by the adherents to an unfriendly local institution, naturally the friends of freedom, North and South, rallied to its defense. Now that liberty and union have been maintained throughout this broad land, "decoration day" has been added to our list of national holidays, when, during the month of flowers, a grateful people decorate the graves of our fallen heroes who sacrificed their lives in defense of our cherished country. In addition to this annual floral offering, monuments of granite throughout the land testify perpetually the regard cherished for the defenders of our liberties by a grateful people that live to enjoy them.

But what is liberty without education? Indeed, the higher and better forms of liberty exist only as the fruitage of a generous system of popular education permeating the entire body politic. The cause for which we labor and in whose promotion we are now convened, and in the interests of which the teachers of this and other states labor and periodically gather in counsel, is then worthy of our best efforts, and we may befittingly pause thus early in our annual session to consider the services rendered by distinguished educators of our State, who have finished their labors among us and during the year now about to close been gathered to their reward.

A liberty-loving people early sought a home on the rock-bound shores of New England that they might even in the far-off New World enjoy religious liberty, denied them in the Old. So highly did they prize this God-given right, denied them in their ancestral homes, that they counted as nought the perils of crossing the Atlantic at an inclement season, and the hazard of dwelling among savages during the rigors of a northern winter, in order to plant a colony, at any cost and sacrifice, in which themselves and generations after them might perpetually enjoy this inestimable privilege.

The following paragraph is from the Massachusetts Colony Laws of 1642: "For as much as the good education of children is of singular behoof and benefit to any commonwealth; and whereas many parents and masters are too indolent and negligent of their duty in that kind: It is *ordered* that the selectmen of every town in the several precincts and quarters where they dwell, shall have a vigilant eye over their brethren and neighbors, to see that none of them shall suffer so much barbarism in any of their families, as not to teach, by themselves or others, their children and apprentices, so much of learning as may enable them perfectly to read the English tongue, * * * upon penalty of *twenty shillings* for each neglect therein."

In the memorable ordinance of 1787, for the government of the Territory of the United States, northwest of the river Ohio, "It is ordained and declared by the United States in Congress assembled, * * that religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged." In keeping with this statute, Washington in his farewell address said, "Promote, as an object of primary importance, institutions for the general diffusion of knowledge," adding, "In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened."

Michigan was admitted into the Union in 1836, with the provision in her constitution, that "the Legislature shall encourage, by all suitable means, the promotion of intellectual, scientific, and agricultural improvement," and in

July of that year Rev. John D. Pierce was nominated to the office of Superintendent of Public Instruction, and the nomination was unanimously confirmed by the joint action of both houses of the Legislature. By an act of the Legislature there was confided to Mr. Pierce, as Superintendent of Public Instruction, the responsible duty of reporting a system of common schools and a plan for a university with branches. The plan he presented, pursuant to this act of the Legislature, is very nearly identical with that which has been developed during the forty-six intervening years, and is in successful operation at the present time. But instead of acadamies or branches to the university we now have the high schools of our admirable system of graded schools for villages and cities. These, however, are very largely a development of the last two score years, which previous to that time were unknown to the system of education of the American States.

When the writer first became practically familiar with the Michigan school system, nine years after Mr. Pierce entered upon his official duties, the University had not graduated its first class; there were several branches still in operation; not a single union or graded school had been organized in the State, and not a public school of any kind in the Upper Peninsula; and we had neither Normal School nor teachers' institute, and a score of years passed before the establishment of our now old and successfully working Agricultural College. I make this reference to the great improvements that have been made in the schools of the State in a comparatively brief period, that we may better comprehend the practical wisdom of him whose forecast and prescience anticipated all this, and planned for it. Mr. Pierce had great faith in the power of common schools as an agency in obliterating the distinctions between rich and poor, and developing mutual respect for each other among the children of all classes, who here meet upon a common level, and thus fitting them for their duties as citizens of the republic.

Mr. Pierce was born in Chesterfield, New Hampshire, in February, 1797, and died at Bedford, Massachusetts, in April, 1882, at the advanced age of eighty-five years. He graduated at Brown University, Providence, in 1822, at the age of 25 years. After studying one year at Princeton Theological Seminary, he entered the ministry of the Congregational church. In 1831 he came to Michigan in the service of the Home Missionary Society. As already stated, on the organization of the State government, in 1836, he was unanimously appointed Superintendent of Public Instruction, and there was intrusted to him the responsibility of devising a plan for organizing the school system of the State, and for the sale of our school and University lands, which was adopted by the Legislature, and which has constituted the basis of our present admirable school system, which is so widely known and praised in this and other lands. After five years' valuable service as Superintendent of Public Instruction, Mr. Pierce resumed the Christain ministry, which was his chosen life work. In 1848 he was a member of the State Legislature, and in 1850 of the constitutional convention, in which he did effective work in securing the incorporation in the Constitution of the provision for free public schools. He was afterwards two years county superintendent of schools for Washtenaw county. Throughout his long life he maintained an active interest in the educational affairs of the State, frequently attending the Normal School and University anniversaries, and meetings of teachers and county superintendents.

Mr. Pierce was thrice married, his first wife dying childless. His second wife died of the cholera in Marshall, in 1832, leaving a daughter who died at the age of fourteen, and a son who died of disease contracted while serving

under General Scott in the Mexican war. In 1833 Mr. Pierce married a third wife, by whom he had some eight or nine children; his death occurring at the residence of his only surviving daughter, near Boston.

But for the labors of Mr. Pierce, and like earnest workers who coöperated with and have succeeded him, such a meeting as this, at this time and in this place, would have been impossible. With such benefits as we already enjoy, reached within less than fifty years from our State organization, what may we not hope for, and attain to, in education and all that ministers to the well-being and prosperity of a free people, before the close of our first century as an organized State, provided we continue in earnest and well directed labors, on a foundation so well laid by our fathers, and so well built upon hitherto. The completion of this good work, fellow teachers, rests with us, and with those who come after us. Let us then work on, in the belief that coming generations will realize all that was planned for by the fathers, and continue each to do his appointed work well, trusting that He, who careth even for the sparrows, will crown our efforts with his blessing.

ZELOTES TRUESDEL.

BY W. S. PERRY.

Zelotes Truesdel was born September 6, 1829, in Wayne Center, Steuben county, N. Y. His early boyhood was spent upon a farm, with such opportunities for study and culture as usually fall to the lot of a farmer's son. There was little about him to arouse his latent, intellectual ambition. He, however, early developed a strong taste for reading, which dominated his young life, often at the expense of his chores and to the annoyance of his father. His parents were slow to discover that he was destined to a life of letters and education.

When he was fourteen years of age, the family removed to Green Oak, Livingston county, Michigan, and settled upon a farm. Young Truesdel, however, was not attracted by the comforts and profits of an agricultural life. His books, such as he could command, absorbed his interest and all his spare moments. With little extraneous aid, at the age of 16, he had qualified himself to pass the inspector's examination for a certificate to teach a public school, and at that early age he entered upon the duties of what fortunately proved to be his life-work.

The success of his first school, if not remarkable, was still, considering his age and the circumstances, noticeable. The school had been broken up by a squad of rough, unruly boys. Mr. T., though but a stripling, managed to quiet the turbulent elements and to guide them safely through two school terms, bringing into notice thereby some prominent traits of his character as they developed in after life.

For some years along this period of his life, Mr. T.'s time was mainly occupied in winter teaching and summer farming, all spare moments being crowded with study and reading. His studies, though ardently pursued, seemed to be guided by no ultimate purpose, until the revival of interest in the State University, consequent upon the advent of Dr. Tappan as its President, in 1852. The establishment of a scientific course at the University, co-ordi-

nate with the classical course, seemed to stimulate, as it promised to gratify, his mental predilections. Consequently the following year, 1853–4, we find him pursuing his preparatory studies at Albion in the Wesleyan Seminary or, as it was then called, the Albion Female Collegiate Institute and Wesleyan Seminary. In 1854 he entered the University, scientific course, and so well had his preparation been made that he was admitted to the Sophomore class. He graduated in 1857, having, among others for class-mates, Hon. Cushman K. Davis, Governor of Minnesota, Prof. J. C. Watson, Levi T. Griffin, Esq., Detroit, and Rev. D. H. Taylor, Owosso.

Mr. Truesdel now took Greeley's advice, and with his knapsack and education, constituting his earthly possessions, he went west, intending to teach if opportunity proved inviting, otherwise he would enter the law, for which many of his friends felt that he had special adaptability and fitness. While passing down the Mississippi river, his attention was arrested by a fine-looking school building at Moline, Ill., and he went ashore to prospect. It was a thriving town of 3,000 inhabitants. He found the school authorities in want of a superintendent, and he immediately came to an agreement with them to take charge of their schools. He remained at Moline three years, gaining valuable experience for the more arduous work of the future, and winning golden opinions not only for his general management, but for his skill in the conduct of some affairs of critical moment. At Moline, also, he found and married his estimable wife, Mrs. Helen Johnston Truesdel, who survives him.

In 1860, Mr. Truesdel responded to a call to assume the Superintendency of the public schools of Champaign, Ill. He entered upon this new and more reponsible field of work with high hopes and large promise, both of which, for a time, were fully realized. The schools were thoroughly organized, the teachers caught the Superintendent's spirit of high and conscientious endeavor, and the community contemplated with evident pride the educational out-look of the city.

In the midst of the most ample success and usefulness, Mr. T. began to show signs of failing health. He had apparently over-taxed his energies. However, with a careful husbanding of his strength and some extra vacations, he continued at his post for three years, when he resigned and accepted an easier position at Springfield, Ill., hoping that the lessened work and change of air would restore him to his wonted health; but in this he was disappointed, and within a year he was obliged to relinquish his work entirely, whereupon he returned to the old family farm in Green Oak to recuperate his wasted energies. He remained upon the farm for two years, gathering up his forces, both mental and physical, for future service in the educational field. In 1866 he was invited to take charge of the schools of district No. 2 of Flint, and accepted. A great work awaited him here, but it was work to which he was peculiarly adapted. The public schools of Flint had never been organized. They were carried on in four districts, with four sets of officers, four sets of text-books, and as many sets of jealousies. No one of them was better, or could be better, than an ordinary country school. There was really nothing to which public spirit and sympathy could attach themselves. It was the mission of Mr. Truesdel to arouse a public sentiment favorable to the union of the four districts, to create a school system and to set it in motion, to popularize the theory of graded schools, and to place the public schools alongside of the other municipal interests in public esteem and trust.

In a very short time he had thoroughly organized his school, systematized the work, selected competent assistants, and established a reputation for good

management which attracted scholars from the other districts of the city. He at once set to work to consolidate the separate districts into one, an undertaking of no mean magnitude. The jealousies of the rival boards, the interests of the other teachers, and the local pride of citizens precipitated a conflict which, only after the most persistent fighting, finally issued in success. The battle was won not so much by skilled maneuvering as by sheer force, bred of his faith in the ultimate good results of his project.

It was also under the stimulating leadership of Mr. T. that one of the most elegant school buildings in the State was erected in Flint. Its interior arrangements were substantially the results of his investigations and suggestions. Moreover, preparations had been nearly perfected for the establishment of a normal and training department, upon the opening of the new building. Every feature of the public schools bore the impress of his thought and purpose.

Mr. Truesdel is often called the "father of the school-system" of Flint. It certainly is not too much to say that during his nine years of service there, both he and the schools gained a reputation and standing among public school educators second to none in the State.

Upon the establishment of the State Public School at Coldwater, a first-class organizer was needed to select managers and teachers, to assort the pupil material, to adjust the working forces to their respective positions, and to set the school in operation. It was not surprising that Gov. Bagley's attention was turned to Supt. Truesdel as the man for the position. How well he did the required work there, in the face of serious difficulties and obstructions, the excellent organization he effected, and the testimony of those best acquainted with the school abundantly testify.

At the end of eighteen months Mr. T. resigned his charge of the Public School and went to Ann Arbor, intending to make that his home, and to indulge his desire to pursue some of his favorite studies, especially mathematics, in which department he had contemplated publishing a series of text-books.

In January, 1878, he accepted an urgent call to the Superintendency of the Pontiac schools, which had fallen into a condition of unthrift and disorder. There was no lack of vigorous, systematic work, or of good repute after Mr. T.'s accession to this position. He staid in Pontiac until the summer of '81, 3½ years. During the last two years of this time he had frequent admonitions that his school duties were making inroads upon his physical vitality. Indeed, before his resignation at Pontiac, death had probably marked him for his own. Again he resorted to Ann Arbor, purchased a home, and looked forward to years of rest and physical repair.

But he was not thus to escape service in the educational field. Almost before his arrival in Ann Arbor, he was elected a member of the county board of examiners for Washtenaw county, and in turn was elected secretary of the board. His acceptance of this position seemed inconsistent with his failing health. It may be accounted for in part by a natural reluctance to abandon wholly the vocation of a life-time, but more especially by a deep-seated, ever cherished interest in the better qualification of teachers in our public schools. In his judgment this point had always been most vital to the welfare and usefulness of the schools. And so he immediately set about devising plans for raising the character of the teachers of that county. His work there was very brief, but it sufficed to make evident a marked upward tendency in the qualifications and morals of the teachers of the county. During the autumn of '81,

Mr. T. was also engaged, as was his wont, in institute work, and up to the very day of meeting of this association, in December last, he expected to be present and take his assigned part in the proceedings, but failing strength warned him to desist—his work was already done. His sickness was long and painful, but manfully borne, like all other duties of his life. He faced death with the utmost composure; his retrospection of life brought no remorse; his look into the future, no fear. His death occurred Sabbath morning, Feb. 26, 1882.

His domestic life was what might have been expected from his open, social, generous nature. An affectionate husband, a doting parent, a cheerful companion, and a ready, intelligent converser, his home was the source of a joyous satisfaction to his family, and the center of attraction to his intimate friends without. Destitute of all social presumption and ostentation, of the most extreme simplicity of manners, he yet made his friends fast with hooks of steel, and by his modest virtues commanded their allegiance.

Very few teachers of our State had gained a more solid reputation than had Supt. Truesdel. This was due primarily to his moral integrity, fair-mindedness, and unassuming conscientiousness. The elements of candor and sincerity are still rare enough in the human race to make them appreciated wherever found. More popular elements will often tickle the fancy and momentarily captivate the judgment while these sterling qualities are making permanent conquests beneath. So it was with Mr. Truesdel. His reputation is by no means brilliant, but it is substantial.

He was a man of very positive convictions. His theories and policies were sharply outlined and tenaciously held. In matters of practical action he was aggressive, unyielding, uncompromising, but in matters of opinion and belief he was tolerant to the last degree.

Secondarily, his popularity was due to his clear-headed, practical judgment, his strong common-sense. He was a safe counselor; his mind was a storehouse of practical facts. Passing events to him all had a meaning, each fitting into its proper place in his mental cabinet, and doing its proper service in his estimate of men and conduct. These qualities constantly took him outside of his profession and made him a man of the world. In matters of business and finance, his counsels were often sought. In the church and in all social enterprises he was a recognized leader or adviser. In politics he was a pronounced democrat, and was thrice honored by his party with the nomination for the office of State Superintendent of Public Instruction. His fitness for that position was of a high and ample order, such that under his hand the educational interests of the State would in no wise have lacked propulsive force or directive skill. Without question, Supt. Truesdel stood among the foremost educators of the State. Or, as another who stood in near relations with him has said, "There are very few individual members of the profession to whom the school system of the State owes more than to Mr. Truesdel." He was an enthusiastic promoter of popular education; heart and mind, physical strength and worldly possessions were consecrated to his profession. One of the most cherished objects of his esteem and solicitude was the State University, which, in certain contingencies, is to have an interest in his estate.

As a teacher in the class-room, he was eminently successful. His work here was always careful, earnest, conscientious. He possessed the rare virtue of investigating every question to its first cause, and the still rarer virtue of imparting to his pupils his own methods of investigation as well as the results. One of his former pupils, now an editor, says: "I certainly never listened to

an instructor that could illustrate the more abstruse principles and problems in algebra and geometry so clearly. The fundamental truths of mathematics were brought out with a boldness of outline that made them intelligible to minds of very ordinary comprehension."

Exactness of knowledge, proved by exactness of statement, was a cardinal doctrine in his creed of instruction. He was conservative rather than diffusive, admitting into his work no distractions, no methods for mere display, no clap-trap. Whatever was gained with him was honest, solid acquisition. As a superintendent, Mr. Truesdel was thoroughly aggressive, original and independent. It was in this province of the educational world that he made himself most sensibly felt and impressed his individuality most fully upon his work. His large executive and administrative abilities made him entirely self-reliant, or, as sometimes appeared to others, dogmatic. A strict disciplinarian, he was no respecter of persons; he insisted upon a rigid observance of the regulations and orders promulgated by him, and extended little charity to violators of his commandments, whether they were teachers or pupils.

He certainly never fossilized. He was an eager student of every educational theory or doctrine that fairly challenged attention, and was abreast of every genuine improvement. He had a quick eye and judgment to detect a defect in school machinery or its operation, and he had a remedy for every evil. He knew the details of his business to an unusual degree, and summoned them all before him in making his plans—so that unlooked for results were rare. School phenomena seldom surprised him. This was due in part also to his keen insight into motives. He read human nature with great facility and accuracy.

In his relations with pupils, teachers, patrons, and superior officers, Supt. T. was ever accounted a man of strict integrity, high sense of honor, and scrupulous regard for the rights, prerogatives, and opinions of others, even to the sacrifice of personal considerations and popularity whenever they conflicted with his keen sense of duty.

Mr. Truesdel has held a long and prominent membership in this Association. Ever since his first connection with the Association—1866—he has reflected honor upon its history. He has done much toward carrying forward its enterprises, rendering its meetings interesting and valuable, widening and strengthening its influence in the State, and impressing its opinions and purposes upon the attention of the State Legislatures. In the Teachers' Institutes held under the direction of the State authorities, he has rendered extended and fruitful service.

His work was well and thoroughly done. His noble life may well be imitated by all teachers who aspire after the best and truest in their vocation.

T. C. GARNER.

BY J. W. EWING.

It is our painful duty to record the death of another of Michigan's educators, who, these many years, has rendered faithful and devoted service in the ranks of his chosen profession.

Prof. T. C. Garner died at his home in Fenton, June 27, 1882, of rheu-

matism of the heart, after an illness of one week, in the 51st year of his age. He remained at the post of duty till two days before the close of the school year. He passed away calmly and peacefully, surrounded by his afflicted family and a large circle of sympathizing friends, having a firm trust in God and a reasonable hope of everlasting rest. The teachers of Michigan extend their deepest sympathy to his grief-stricken family.

There were but few men of his age whose prospects for many years of usefulness were brighter than his. So far as his friends could see, he was physically and intellectually robust and vigorous.

Prof. Garner was born at Bath, Steuben county, N. Y., in 1832. From Bath he removed to Ohio, and in 1857 graduated from Oberlin. In 1859, he went to Missouri to teach and was offered a professorship in a college. He returned to Ohio and married Miss G. P. Mather, who now survives him, intending to make Missouri his future home.

In the meantime political matters became so complicated that his friends persuaded him to remain north till the difficulties between the two sections should be settled. He accordingly removed to Michigan and took charge of the Corunna schools, where he remained several years.

He spent twenty-five years of his life in teaching without ever losing a single term of service. Twenty-two years of this time he spent in the public schools of Corunna, Howell, Owosso, Big Rapids, and Fenton.

He had been only one year at Fenton, and much of that time he was utterly unfit to be in the school-room, but he was so devoted to his work that he could not be pursuaded to give up till his last and fatal illness overtook him.

Prof. Garner educated himself, having in the six years of his college course received only $205, towards his support, aside from his own earnings. Such efforts to overcome existing difficulties develop strong men, men of character, men of principle, men of energy, and our dear brother was no exception to the rule. In 1855 he was converted under the powerful preaching of President Finney and remained an active and consistent Christian till his death. Whenever there was an opportunity, his influence was thrown in favor of religion, temperance, and good morals. He was in active sympathy with the temperance reform and encouraged his wife in her work for the W. C. T. U., urging her to accept for another year the office of State financial secretary.

Prof. Garner has not labored in vain, thousands of pupils have directly and indirectly felt the impress of his noble life. Many have caught from him the inspiration that has impelled them to noble deeds.

His pupils are scattered to all parts of the State, many of them occupying important positions. Over fifty of his students have graduated from Michigan University, Oberlin, and other colleges.

Thus ended the career of him who was wont to be with us at these State meetings and who always greeted us with a genial and pleasant countenance.

Prof. Garner was naturally quiet and retiring, making but little demonstration, yet doing his work no less faithfully in whatever position he was placed. But he has gone where all that he has accomplished for the uplifting of humanity will be fully set to his credit, not as man does, but as the impartial, loving Father does by his faithful children. Truly may it be said of him, "Many shall rise up and call him blessed."

PAPERS AND DISCUSSIONS.

THE NEED OF VISIBLE ILLUSTRATION AND THE PROPER USE OF APPARATUS.

BY J. S. CROMBIE.

Whatever knowledge of objects outside of himself comes into the mind of man must come, originally, through some one or more of the five senses of seeing, hearing, smelling, tasting, or feeling. These senses are the channels through which the world without flows into the brain within. The lack of any one of these senses inevitably reduces the power of man's comprehension. Proofs of this fact are numerous. It is impossible for a man born blind and remaining blind through life to comprehend some things. He can never know what a special color is, as blue, because no words can so describe it as to give him a true conception of it. A man afflicted with total deafness all his life can never know what is meant by a musical sound, because the only way to know, exactly, such a sound is through the sense of hearing. Words cannot describe an odor to a man who never had the sense of smell. Sweet, sour, and bitter would be alike to one destitute of the sense of taste. Any material thing which we can see, or touch, or taste is better understood by us after we have seen, touched, or tasted it. Descriptions of Niagara Falls may be very beautiful and words may be exhausted in giving them, but a man never knows Niagara Falls until he has stood beside the mass of falling water, and has seen it with his own eyes, and heard its roar with his own ears.

If it is true that men and women depend so much upon these five senses, how much more true is it of children. Some one has said that a child learns more during the first three years of his life than at any other corresponding time, yet the only way he has of learning at this age is through the senses. Most of the pupils in our common schools under the age of twelve years learn what they know in this way. They are too young to reason and the power of memory is but imperfectly developed. The aim of many of our teachers seems to be simply to train the pupil's memory. If there is one thing I could say, and by repeating it over and over fasten it into the minds of the teachers of Michigan, it would be this: *Our pupils memorize too much and reason too little.* We crowd facts into their minds on one day and the next day we crowd in more facts and push out those of the previous day. It is like the system used for fattening geese in France. The poor fowls are fastened in cages with their heads projecting outside the bars. Every two or three hours an attendant comes along with a stick in one hand and a pan of meal balls in the other.

He grasps the goose by the throat, forces open its bill, puts in a ball of meal, pokes it down the throat with the stick, and it is done. It makes no difference that the poor bird has not been able to digest the meal poked down two hours before. Every two hours more meal is forced down, day and night, and the result is an unhealthy growth, just as the growth of a child's mind must be when every two hours of the day he is called to the recitation bench and forced to swallow one page of arithmetic, or two of geography, or three of history.

We need more teaching outside of the text-books. We need to encourage more independent modes of thought and expression in our pupils; to make them more independent of the book and more self-reliant; to know because they know and not because the book says so. If, then, it is legitimate for the teacher to call to his aid anything except the text-book, surely there is nothing which he can use to so great advantage as illustrations which carry the thought to the brain of the pupil in the natural way—that is, through the senses. As I understand my subject, it includes any method of illustration that uses any of the senses as a medium for conveying the desired idea to the mind of the pupil.

Illustrations of this kind are too little used in our schools, especially in our district schools. In the graded schools we find apparatus more or less complete, ranging from figures and blocks to teach the primary pupils the idea of shape and form, up to the extensive and costly instruments designed for illustrating the studies of philosophy and astronomy. But in many of our district schools the teacher considers himself fortunate if he has what may be called the necessities and not the luxuries of the profession. There are scores of such schools in Michigan where there is not a map, not a globe, hardly an apology for a blackboard to be found. And what mistakes district school officers often make when they do buy something which can be used to illustrate the studies. I call to mind now a school in this State where there was nothing whatever in the line of apparatus. Finally an agent pursuaded the director to purchase a forty-dollar tellurian. Great was the admiration of the district and fortunate indeed did the people consider themselves when the case was opened and the machine appeared in all its glory. Years passed. Many of the teachers employed did not know how to use the machine, and it reposed for the most part quietly in its case. But the people never ceased to boast of their apparatus. The building might be in poor condition, and the school might be a failure, but the tellurian was there. How much better if the money expended upon that one machine had been judiciously spent upon things far more necessary.

What a loss of time and what an amount of labor must result from attempting to teach geography without a globe and maps. How many weary weeks primary pupils in some of our schools spend in endeavoring to get the idea of numbers in the abstract. It is one of the most difficult things for a child to think of numbers without connecting them with objects, and yet some of our teachers keep telling their classes that two and two are four, and four and two are six, and wonder why it takes the child so long to understand it. Here is a grand chance for visible illustration by connecting the numbers with objects. A wire upon the front of the teacher's desk strung with movable beads or buttons saves much time and labor. Associate two and two with these beads or buttons and the child readily sees that two beads and two beads are four beads. By and by he will naturally grow to think of the numbers without the objects.

Any teacher may, without expense, bring in objects and make rude appa-

ratus to illustrate the studies taught. But the best results are not gained if the objects used are never allowed to go out of the hands of the teacher. It means vastly more to a child who is finding the sum of two beads and two beads, if he takes the beads into his own hands and counts them than if the teacher counts them for him.

In general, it may be said, that there is not a study pursued in our common schools in which illustrations, either by objects or apparatus, may not be employed to great advantage. Some studies cannot be taught without them. Geography, arithmetic, philosophy, chemistry, and astronomy belong to this class. The great danger arising from the use of apparatus, especially, is that it may confuse the mind of the pupil instead of throwing light upon the desired subject. Much of our apparatus is so complex that the attention of the pupil is drawn more to the machine than the principle it is intended to illustrate. If the teacher does not make sure that this danger is avoided it would be as well not to use the machines at all. One of the most successful teachers I have ever known adopted a plan in the use of apparatus before his classes that made it impossible for the points brought out to be forgotten. His method in all his classes where apparatus was necessary can be shown by the manner in which he taught natural philosophy. Every day, before performing the experiments connected with that day's lesson, he took care to explain fully the apparatus used. Then he performed the experiments, and before dismissing the pupils appointed two or three members of the class to conduct the same experiments before the class on the following day, without assistance from him. In this way every pupil became familiar with the apparatus, and the principles illustrated became fastened in his mind. The plan of this teacher was, at first, to appoint the boys in the class to perform the experiments and gradually to give the same work to the girls. He said boys always knew more about subjects taught in philosophy because they had opportunities to see machinery in motion and their attention would naturally be drawn to it. I have yet to see a method of teaching in which apparatus was used which was more successful than the one I have described.

It has been said that the danger in the use of apparatus lies in the fact that it may confuse instead of enlighten the mind of the pupil. There is another point upon the abuse of apparatus by the teacher which may claim a little attention. It is very often the case in any school where a large amount of apparatus is to be found, that there are some portions of it which are useless and have become so through the neglect of the teacher to take care of it. There is a high school in this State which has apparatus costing nearly seven hundred dollars, but in a few years it had been so abused in its use that a committee appointed from the board of education placed the value of it all at only fifty dollars. Lack of care is damaging our apparatus a hundred times more than the proper use of it. Most of the machines are used not oftener than once a year, but after they have been used, are put away uncleaned, without oil, where they become covered with dust—simply hurried out of the way until they are needed another year. Then a half day or a day must be spent upon them before they can be made to work even in an indifferent manner. A valve is gone from the air-pump, or the chemicals were not emptied after the battery had been last used, or the machines are rusty. All this is the result of neglect on the part of the teacher to give proper care to the apparatus. The apparatus room of many of our schools is a graveyard containing the skeletons of useless machines, whose epitaph might be "died from neglect." It has

seemed wonderful to me sometimes that the school boards and the people should spend money so freely in the purchase of apparatus only to have it destroyed in a few years by lack of proper care and attention.

DISCUSSION OF THE PRECEDING PAPER.

C. K. WEAD said:

I am very glad to find this subject on the program and to hear it discussed in a way that I so heartily like. It cannot be too often insisted upon that the essence of science-teaching consists in bringing the student into contact with *things* not *words*: when this is not done, it is a case of false pretenses to say that one is teaching *science*. Of course the preparation of the things—the apparatus or the specimens—requires time on the part of the often over-worked teacher, and this must be provided for in the arrangement of his duties; if he has been selected for his ability in other lines, and in the belief that anybody can teach sciences, the time allowed him for preparation ought to be increased. To show what can be done at an insignificant cost in the way of making useful apparatus, I have exhibited in the adjoining room half a dozen pieces made by students in the teachers' class at the University, *e. g.*, an astatic galvanometer sensitive enough for every experiment in the course, a dissected Leyden jar, etc.

In this connection a new book deserves mention, if only to emphasize the protest against the books that *tell* everything, and tell it as if it were not possible for the student to discover or verify it for himself; the book is Gage's Physics (Boston: Ginn and Heath). Its plan is new and consistently carried out. While the book is a little too hard for all the high schools in the State, in the hands of a live teacher in sympathy with it, I am sure results will be obtained that cannot be obtained with any other book in the market; but it will require, and encourage real mental work on the part of both teacher and student.

M. M. MARBLE said:

It would be well were teachers taught both to make and repair philosophical apparatus. In schools where no apparatus is found a teacher can make many pieces of useful apparatus with little expense of time or money, whereby greater interest may be aroused and the sciences be taught more effectively.

Again, where apparatus has been provided it is absolutely necessary that the teacher in charge be able to keep it in repair, or soon it will become broken and useless.

The State Normal encourages students in making apparatus at leisure hours.

The following students of the Normal have devoted their spare hours during the past 3 or 4 weeks to the preparation of the apparatus on exhibition at the Association: Messrs. Key, Hull, Cornish, H. Townsend, C. Townsend, Woodworth, and Marble.

The following statement shows the apparatus prepared by the students with a comparison of the manufacturers' prices with the actual expense in material to the students. The time consumed in work is not considered in the expense, as the work was taken as a necessary exercise:

	Manufacturers' Price.	Cost to Students.
Mechanical Powers	$15 00	$0 30
Battery and Telegraphic Instruments	25 00	2 50
Reflector and Refractor	6 00	75
Sonometer	20 00	85
Pendulum	10 00	25
Centrifugal Railway	4 00	60
Organ Pipe	1 00	05
Model Glass Pump	2 00	10
Projectile Machine	2 00	05

COUNTRY SCHOOL HOUSES.

FIRST PAPER.

BY JULIUS HESS.

Under buildings of this description we usually understand school buildings of small dimensions and of moderate cost, yet all the science in regard to light, ventilation, heating, and comfort should in them be considered to as large an extent as in more pretentious ones, and my subject in this article will, therefore, touch upon these various points in the following rotation:

I. Location of school buildings.
II. Construction.
III. Fenestration or lighting.
IV. Ventilation.
V. Heating.

Inasmuch as the proper consideration of any one of the points above mentioned would be sufficient to fill an entire evening, and as I was asked to go over the entire ground, I can, therefore, give only a few of the most essential points and facts, which are necessary for a comprehensive understanding of the matter.

I. Location of School Buildings.

In selecting the ground or lot for the location of a school building, school boards should never select a lot of lower elevation than the immediate surroundings for which said lot would be a common cesspool, but they should always select one of moderate high elevation, and if possible with sand or gravel subsoil. Before the building is erected, the ground under the building should be cleared of all rubbish and vegetation, and the surface should be slightly raised above the lot on the outside of the building and given a gradual slope away from the building on all sides. In this manner a great amount of dampness and the fermentation of vegetable matter under the building, with the accompanying unwholesome air which would find its way through the rooms above, would be obviated, and outside surface drainage would in all directions be turned away from the building. Other considerations in the selection of a lot should be the distance to the homes of the scholars, the near presence of good

drinking water, and the absence of low, marshy ground in the near neighborhood.

II. Construction.

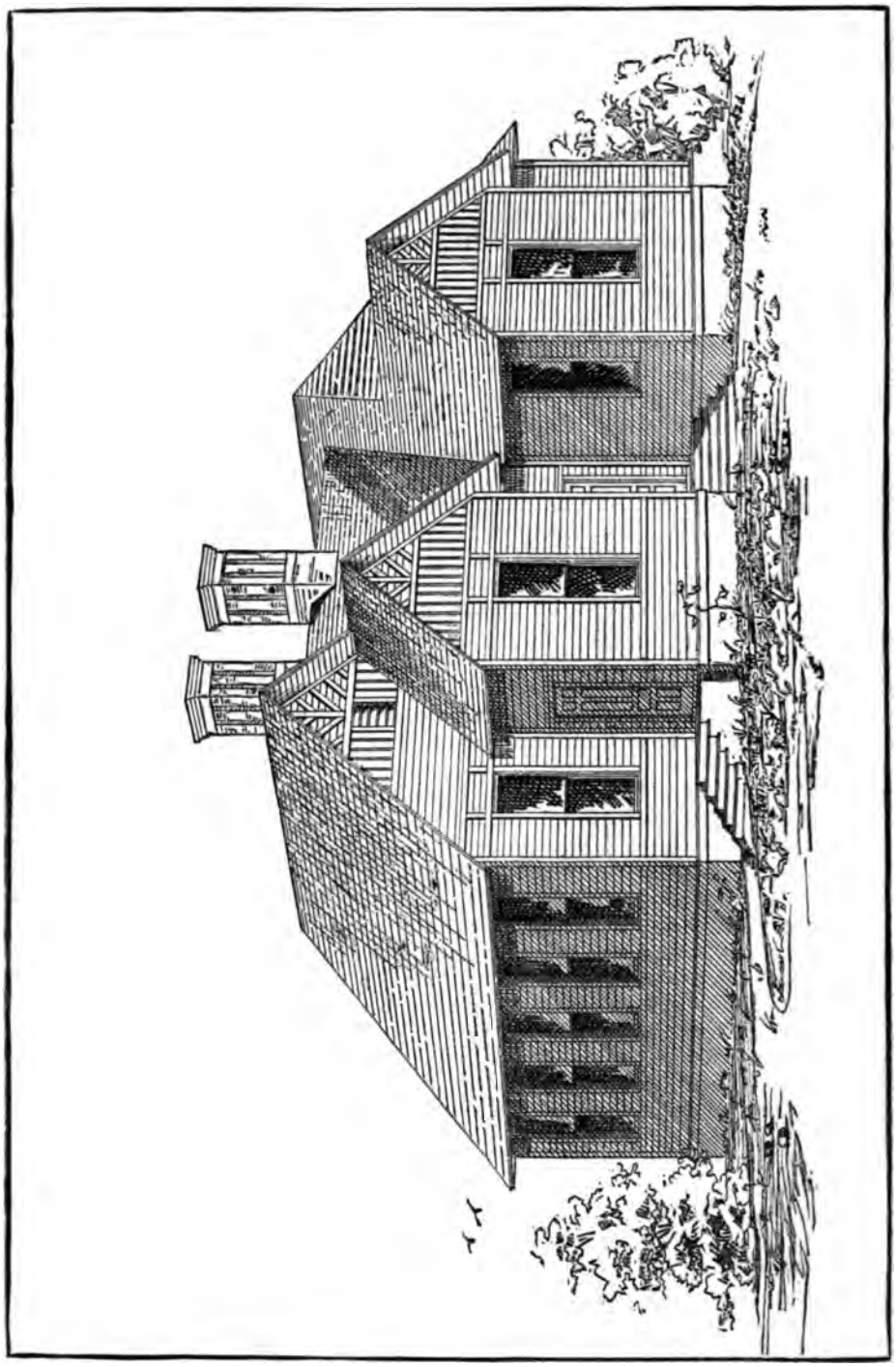
As buildings of this class have to be inexpensive, they would probably in this, our State of Michigan, where lumber is so abundant and constitutes the cheapest building material, be built of that material, and hence I shall speak only of frame buildings. These I shall separate into two classes: 1st, The log building; and 2d, the ordinary frame building.

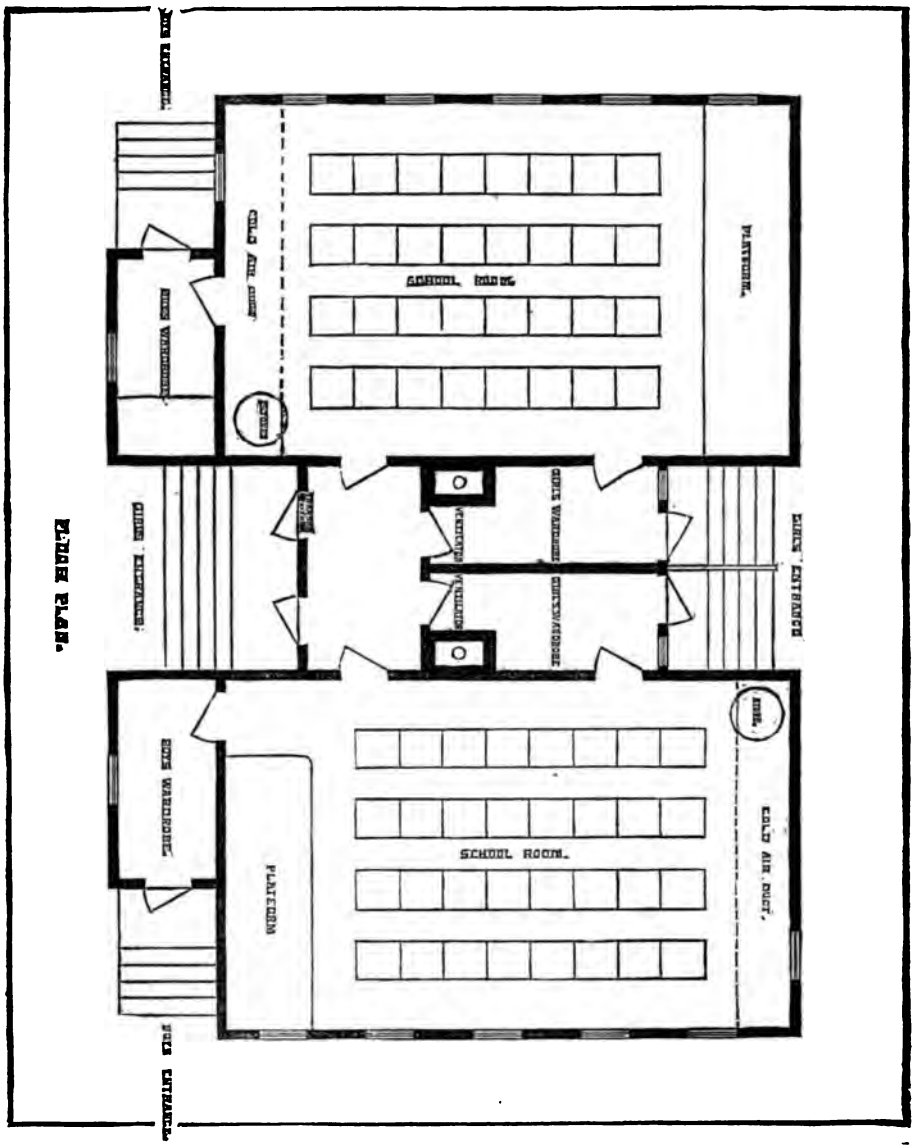
1st, We are familiar with the rude mode of erecting our frontier log houses, how our frontiersmen fell the trees and hew them flat on two sides to a very imperfect line, and how the openings between them are filled with mud, chips, moss, etc. Buildings of this class are put up principally in locations not accessible to railroads or steamboat landings, and where good wagon roads are few and far between.

When communities are compelled to put up buildings of this class, I should like to suggest to them a little more "care and taste" in the workmanship, since a work that is worth being done at all is worth being well done. I do not mean that more clay should be placed in the joints of the logs, but that the logs should be hewn to a more perfect line, the inside surface be squared and if possible planed straight and smooth, and, to do away with the ugly mud in the cracks, the top and bottom of each log should have a groove plowed out and a slip-tongue be neatly fitted into it, which will effectually keep out the cold and stop unnecessary draughts. With a little taste displayed in trimming off the ends of the logs at the corners of the building a very tasty and, compared with its more modern companion, a better building can be erected. The inside walls of such buildings would need no plastering, but white lead paint, or in the absence of this, good old fashioned whitewashing often renewed, would be sufficient.

2d, The ordinary frame building and its construction is familiar to every one of us; it should, however, never be forgotten that in order to have the ventilating and the heating apparatus work to satisfaction, such buildings should be put up with air-tight walls, windows and doors. In order to accomplish this, the walls should be rough boarded, then covered with good sheeting paper, and then the siding be put on. The floors should be doubled, or deafening put in under them. Another good way to construct such buildings, which is much practiced in some sections of this country, is, to put a coat of plaster on lath, between the studs, commonly called back-plastering. Inside walls and ceilings should be plastered, and one coat of plaster should always extend to the floor, if a two-story building. The ceilings of first story may be ceiled up. Roofs should always be provided with gutters and conductors, and these be connected to drains, to carry off rain-water to some friendly ditch or cistern.

Doors to all kinds of school buildings should be made wide and to open outward; windows should be made with sash hung by weights, and so that the top and bottom sash can be opened. Stairways leading to upper stories should be wide and be easy to ascend, and so arranged that no jam can occur on the lower floor, if all scholars from the different rooms should want to leave the building at the same time. Cloak rooms should be well lighted, and at least 10 inches clear blank wall space should be allowed for each scholar. Head lights over doors should be made to open without the use of step ladder or





chair. The wall behind the teacher's platform should, if possible, be an unbroken surface and be used for blackboards. School-houses, or any building of habitation, should be set well up from the ground.

III. Fenestration, or Lighting of School Rooms.

It is a well settled fact and admitted by all eminent physicians of to-day, that defective eyesight, and particularly near-sightedness, is largely on the increase in all civilized countries. The cause of this can be plainly traced to

defective lighting of living and work rooms. School rooms therefore should receive particular consideration in the matter of window arrangement.

In Vol. II, pp. 605 and 606, of Dr. Buks's Treatise on Hygiene and Public Health we are assured that short-sightedness, dimness and weakness of sight are increasing generally in Germany, Russia, America, and England, and in proportion as the children of these countries are compelled to attend school for a certain number of years; and we are assured at the same time that the percentage of defective eyesight is much greater where school rooms are poorly planned regarding their window arrangements.

Too much light, or not enough, cross lights, or light falling at a low angle into the rooms, also the reflection of various colors, are all injurious to the scholars and teachers, and should therefore in the planning of a school-house be properly considered. For such work the services of an expert architect should be employed, or good examples of model school buildings should be followed. The quantity of light cannot be regulated accurately on account of the irregularity and irregular strength of sunlight at different times, such as cloudy days, or the difference between morning, noon, and evening; but a few simple rules may be taken as a guide, and in case of too much light, it must be toned down by the use of blinds, shutters, or window shades.

For such work the teachers should be ever watchful, and each one should feel it a heavy responsibility resting upon him or her to care not only for the pupils' minds, but also for their physical welfare.

Light from above a person's eye is the most natural, and accepted by all as the best; the most unnatural is light from below. For a person that is writing, drawing, or working, light from the left-hand side is almost indispensable, while light from the right-hand side is unfit for use except for reading or oral exercises. Light from the back and left-hand side together is not injurious, but may at times be inconvenient to the teacher; from the back and right-hand side together, and from the front, should never be tolerated in a school-room.

The German authorities all agree with these remarks. Dr. Erissman says: "A room which cannot be sufficiently lighted from the left-hand side is unfit for a school-room; but we can not always have it so, especially if outside appearance of a building is to be any consideration.

"The size of windows collectively should measure not less than one-sixth the floor-surface of a school or working room. This, then, would compel a room to be made longer than wide, especially if to be lighted only from the left-hand side. This, of course, is in some cases objectionable again, particularly if the difference in the length between the two dimensions is too great, because it brings the rear seats too far away from the teacher and blackboard, and I should therefore advocate at least one window in rear wall near left-hand corner, wherever practicable.

"If a school-room therefore measures 23x38 ft. one-sixth its floor-surface would be about 146 ft. If the room is 12 ft. high, the window 3½ ft. from floor and 6 in. from ceiling and each be 3 ft. wide, glass surface, it would take six windows of this size to light the room; of these one may be put in the rear wall, as above mentioned. In locating the windows, the first one commencing near front wall, should be placed as near the front as possible and in harmony to good taste, because a large pier at the front would keep a large portion of the blackboard in constant darkness.

"There should always be a wide aisle provided between the wall pierced by

windows. The object of this is: to bring the nearest row of seats out of the cast-shadows of the various piers."

The reflected light should also be considered. As has been mentioned before, light from above is beneficial. The reflection from above should therefore be furthered as much as possible. This can be accomplished by making a clear, white ceiling. Light from the front and right-hand side is objectionable, as before stated, hence reflection from the walls should be avoided. This is easiest accomplished by painting or calcimining the walls some neutral tint, a stone color, etc. Walls plastered without putty-coat or hard-finish, but done with fine sand-finish, smoothly troweled down, are best; the contrary with ceilings. These should be smoothly plastered with hard-finish or a putty-coat.

Blackboards should never be located between windows, as they would receive a very unfavorable light and would strain the eyes of pupils too much; but if located in front and right-hand side these objections fall away. Rooms where only drawing is done should have a northern exposure; but where a school-room is used for all kinds of work and is occupied by the same persons nearly all day, a southern exposure is more favorable, and is better than east or west. The reason of this is, that the sun's rays from both these directions are at times at such an angle that they are directly injurious and would have to be shut out at the cost of a sufficient amount of light.

IV. VENTILATION.

The subject of ventilation should be described in connection with heating, as in most cases heat has to be applied if any attempt at ventilation is to be made, and for this reason I shall follow this subject up with the heating of a school-room having ventilation in view.

This subject is very little and by many wrongly understood. The mere cooling off of the air in a room signifies nothing, as the purest air can be too hot and be uncomfortable and cool air may be the foulest.

If reliance on enough pure air is to be placed principally upon the heating apparatus the following rules ought to be considered:

1st. The stove, furnace, or other heating appliances must be liberal in dimensions, as more heat is required where ventilation is applied.

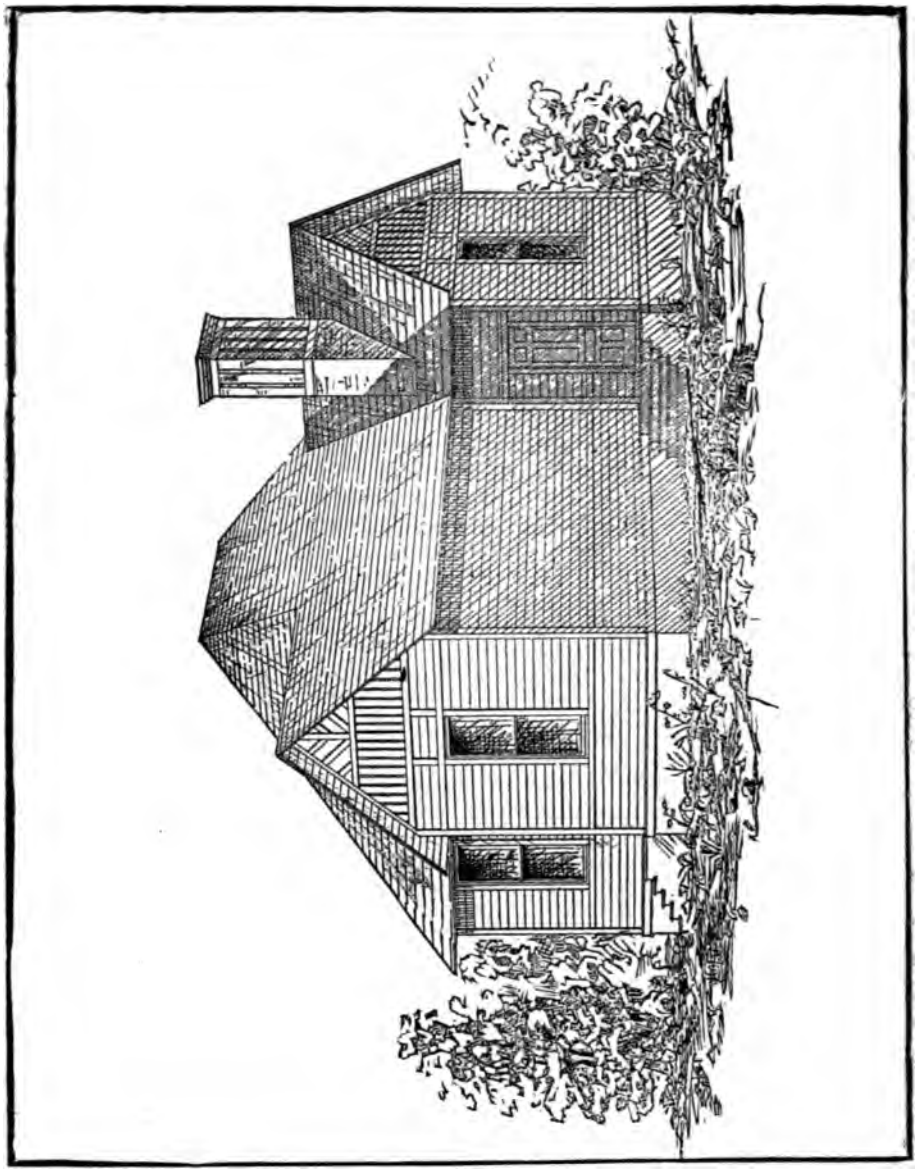
2nd. The rooms should be made as air tight as is possible with good workmanship, except, of course, where openings into flues, ducts, etc., are placed.

3d. Rooms should not be too lofty; 12 feet is sufficient and over 14 feet is waste.

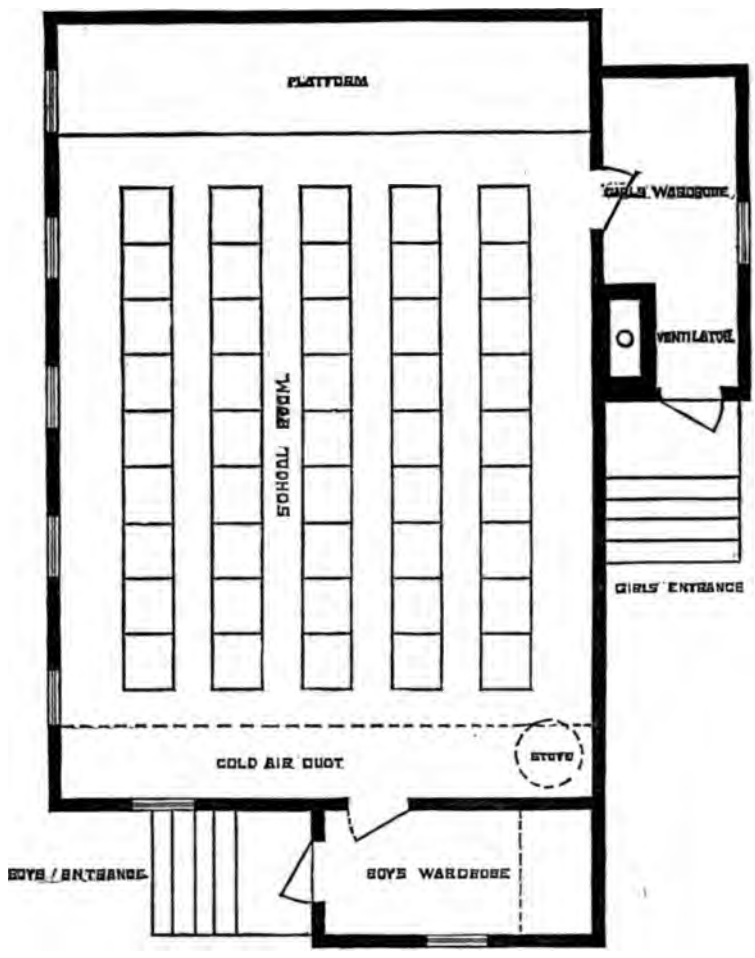
4th. To save as much fuel as possible, the ceilings should be made air-tight and be covered with some non-conducting material, such as deafening, etc.

5th. The air ducts should be large and of such dimensions that the entire air in a room may be changed at least three times per hour. By careful, practical experiments it has been demonstrated that about 1,200 cubic feet of air should be admitted for each person per hour. This would be equal to 20 cubic feet per minute for each person, and a room containing 50 persons would have to receive 1,000 cubic feet per minute without allowing anything for fires or other sources of contamination. To supply this amount of air in a room 25x32 feet, and 12½ feet high, the entire amount would have to be changed six times per hour.

If it should be undertaken to move this amount of air through one register one foot square, the air would have to travel at the register at the rate of a little more than 11 miles per hour, and through two registers at the rate of



a little over 5½ miles per hour, still too fast not to be felt as a disagreeable draught. It has also been ascertained that by ordinary means we cannot move this amount of air oftener than about three times per hour, and the velocity of air at one register should not be more than one to two feet per second. According to this the ventilating registers should collectively measure from eight to sixteen square feet of opening, the latter more advisable. As the velocity of air may be increased in the foul air-ducts without any disagreeable results, they may be contracted to 5½ square feet of their sections



FLOOR PLAN.

collectively, and should be made absolutely air-tight in order not to retard the movement of air. The ventilating shaft should be of the same or nearly the same size, and must be heated in order to set the air in motion, and this should be kept up as long as the room is occupied.

To make up the deficiency of air required for each person, the room should be thoroughly flushed with fresh pure air before and after each school hour. This can be done by opening all doors and windows for a few minutes, or can be partially done during gymnastic or calisthenic exercises, when a lower temperature would be too cool for a sitting poisture.

The warming of the ventilating shaft is most economically done by passing the smoke-pipe, made of good conducting material, such as iron, up through the inside of it.

The foul air-ducts are easily constructed by first putting in a deafening floor between the joists, then cross-furring the joists on top, and then laying the floor on these.

The fresh air-ducts should be nearly as large as the foul air-ducts, and should open, if possible, on two sides of the building. These also should be made as air-tight as possible and connect directly with the furnace.

For summer ventilation, the windows, doors, or headlights should be opened either entirely or partially, according to the velocity of the wind. In damp, heavy weather, a small fire in the furnace will be also found beneficial, as this will set the entire air in motion.

V. Heating.

The most economical mode of heating a school-room in connection with ventilation is probably by a hot-air furnace. To those not familiar with them I should explain that they are simply large stoves surrounded by a sheet-iron jacket or a brickwall, leaving an air-space between the jacket and outside surface of said stove. The fresh air is admitted at the bottom and under the stove, passes in this space up along the walls of the stove, becomes heated, then is conveyed either directly into the room or through hot-air tubes to other parts of the building. Each furnace should be provided with an evaporating pan, which should be constantly kept full of water, and should be located in the air-space where the hot air has a chance to take up as much moisture as it may. The jacket of the furnace should be fixed closely to the floor and in a manner so that no air may pass from the room into the furnace.

The cold air-ducts are best brought directly under the furnace, and by having the floor partially removed under the heater the air has an unobstructed passage into the room. I must, however, remark that care must be taken to stop off properly any possible connection between the furnace and foul air-duct, where furring has been laid across the joists.

The cold air-ducts, as before remarked, should be made air-tight, especially under the building. They should extend to the outside of the building, and have their ends open and protected with wire screens. Each duct should also be provided with a revolving damper, by which these ducts may be partially closed if found necessary. Never put these ducts down on or into the ground, but fasten them up as near the joists as possible, and thus leave a good wide space between them and the surface of the ground.

In getting a furnace, always be sure to get one large enough, because you must not forget that it will take a great deal more fuel to heat a room sufficiently when proper ventilation has been applied in a building, as enough more heat has to be supplied to heat the constant stream of cold air passing over a furnace into the room and to make up for the wasted heat going off with the foul air. The air passing into the room through the furnace must be heated slightly in excess of the air already there so as to force the air in the room to move.

With a proper ventilating and heating apparatus in a building the work is, however, only half done; the other half must be supplied by the brains of the teacher or person attending the heating apparatus, and if not properly done or understood, it might as well not be there at all. Thermometers should

be placed around a room and only these should be consulted; "they never lie." The personal feeling of a teacher is not always in conformity to these instruments, and in that case the fault may be looked for somewhere else than with the heating or ventilating apparatus; a doctor should then be consulted.

COUNTRY SCHOOL HOUSES.

SECOND PAPER.

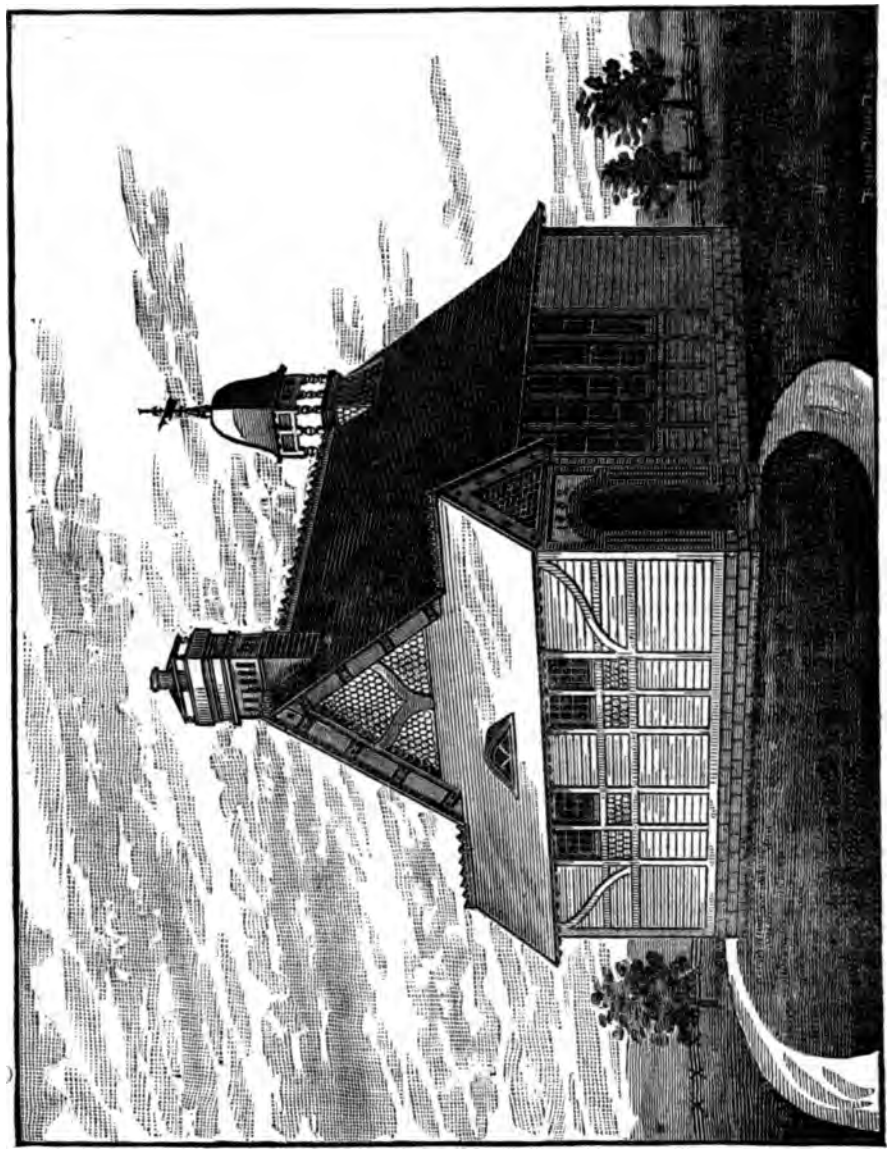
BY WILLIAM APPLEYARD.

LADIES AND GENTLEMEN,—The subject of country school-houses is a broad one, affecting as they do the moral, intellectual, and physical training of the numerous children who are sheltered and taught in them. Although at the risk of repeating much that has already been said, I am glad to be able to talk upon this subject to the teachers of Michigan, for having the care and well being of so many children at heart, you can and do appreciate the glaring defects in our present mode of school-house construction. Some of you, perhaps, were in early years taught in the "old log school-house," heated possibly by a large fire-place in a larger mud chimney, and I dare say you look back with pleasure upon the wintry mornings as you took your seat before the roaring fire. Approaching the school-house there was a certain air of warmth and picturesqueness about it which made it inviting. The days passed without headache or fatigue, your senses were keen and on the alert, and you went home when school was "out" pleased with your day's work.

Dr. Kedzie in his valuable paper on school-houses, published by the State Board of Health in 1873, says, "I well remember the log houses of the early settlers in this State, the open cracks between the logs and the crannies around doors and windows, through which every wind of heaven found entrance, and the huge fire-place which afforded free escape for any foul air. I remember how we used to revolve like planets before the roaring fire. Each one revolving on his own axis, to let one side thaw before the other froze; but I also remember the almost uniform good health of those early days, always excepting disease of malarial origin." Rude as was the log school house it had about it some elements of art which made it pleasing to the eye. The lines were bold, the chimney was proportionate to the size of the building, and withal it had color. These elements softened by a background of nature gave to it the picturesque look which we have noted. So much for its rugged beauty, which if not requisite had an inviting rather than an unpleasant effect.

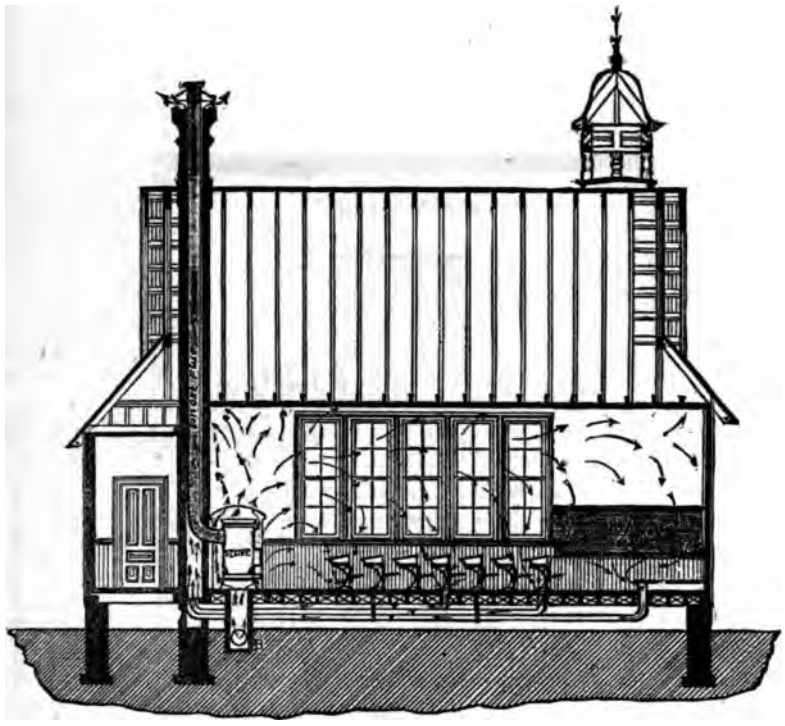
The days of log school-houses are passed; they were a necessity and a virtue of their time. I do not seek to resurrect them, but to create a substitute more suited to our modern tastes and necessities.

I know of not one good element in our country school buildings as now constructed. They are not to be compared to the log school-house for beauty. Their clap-boarded sides make a succession of long, almost imperceptible horizontal lines, stopped by sharp, vertical corners, and broken only by the marked vertical lines of the windows, which are spaced three upon a side with unfaltering regularity, the whole covered with a coat of colorless paint, and a roof



that is depressing from its unrelieved flatness, while, to crown all, the meager 12x20 inch chimney peeps up through the roof as though afraid of being seen and ashamed of the way in which it performs its allotted task.

These are the general exterior characteristics of our country school buildings; and I say that the effect is as depressing and uninviting as the building is senseless. To compare the hygienic qualities of present country school buildings with those of the log school-house would, I think, shame us. The general complaint of the day among school children is that of lassitude, headache,



LONGITUDINAL SECTION

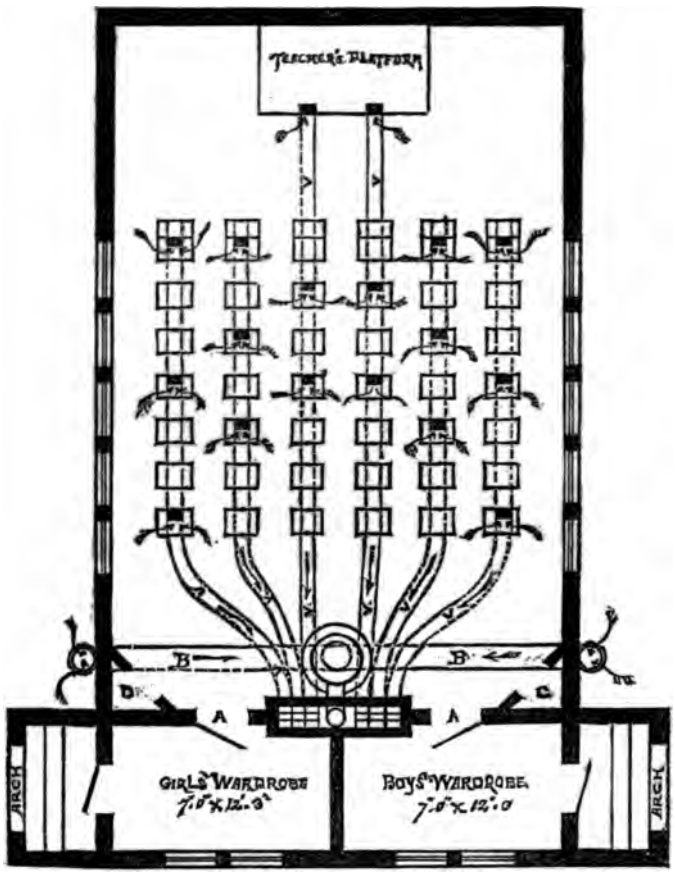
nausea, in fact a sort of general debility, resulting from over crowded rooms; foul air, bad light, and many other evils.

Dr. Kedzie, in his paper before quoted, says, "By securing the best possible conditions for the health of the young, we must effectually secure the well being of the State; and any course which saps the vigor of childhood is a blow at the common weal.

"Under the action of our civil laws we have almost nothing to do with the conditions of health in private houses. Every man is lord of his own castle, and he may make it as unhealthy as he will. But with the conditions of health in the public schools, the officers of the law are almost omnipotent.

"The public school is almost the only place where the law may directly interpose to secure for the people the conditions of health.

"By law we have made attendance on school compulsory; by the law of an enlightened public opinion we should also make compulsory the conditions necessary for vigorous health during their attendance on school."



PLAN OF SCHOOL ROOM

Reference

42 SITTINGS
V. VENTILATING HOODS UNDER DESKS
V. " DOORS " FLOOR
A. GLAZED DOORS WITH TRANSOM HEADS
B. COLD AIR DUCT
C. TEACHER'S CLOSET, D. BROOM CLOSET

Reference

AREA OF FLOOR 625 SQ. FT.
HEIGHT OF ROOM 14 FT.

Now, Dr. Kedzie struck this key note ten years ago, and what has been done since to ameliorate the conditions of school life? Absolutely nothing. It is now high time for improvement, and I would say to you teachers, demand from this Legislature an act which shall secure to the children in your charge the conditions so necessary for their common health. I say demand it, it is your right, for unless compelled to do otherwise, district school boards, through penurious, false economy, and ignorance of existing evils, will continue to furnish you with school buildings which are a disgrace to our civilization.

In view of the necessity of better school-house construction, what changes are to be made? How are we to construct buildings which shall combine economy with good hygienic qualities? The form of building will, to a great extent, depend upon the amount to be expended and the number of scholars to be accommodated. It is unnecessary that a school-house be highly ornate or stately. I consider that tasteful simplicity should enter into all its parts. It should be made interesting to the children who come to occupy it each day, and it should be made to reflect the nature of its surroundings. Nowhere than in the country are the surroundings better fitted to bring out the elements of art which make a simple building attractive. There are the woods, the fields, and a pure atmosphere, made blue by distance, while within the building is childhood. Therefore I say that of all school buildings, those in the country districts, should be artistic. It is an undisputed fact that children delight in harmonious color. A little girl will chose a wax doll in preference to a rubber one, not because of the outline or material, but because the wax doll has rosy cheeks, blue eyes, and yellow hair. Herbert Spencer, in his splendid monograph on education, asks, "What is it that the child first tries to represent?" He says: "Things that are large, things that are attractive in color, things round which its pleasurable associations most cluster—human beings from whom it has received so many emotions, cows and dogs which interest by the many phenomena they present, houses that are hourly visible and strike by their size and contrast of parts. And which of all the processes of representation gives it most delight? Coloring. Paper and pencil are good in default of something better; but a box of paints and a brush, these are the treasures."

So, I say, if a school building must have plain outlines, give it color. If brick are to be used in the walls, then I would choose red brick, and in default of these stain the brick red and pencil the joints with dark brown. If the roof must be of shingles, then paint them in imitation of tiles or red slate; it not only has a good effect but it is economy. If the building is to be frame, then paint the sides sap-green and relieve it by painting the corner-boards, window-casings, and cornice a dark green, and in this case an excellent effect may be produced by striping the window-sash with Venetian red. Above all, I consider white paint on a country school-house an abomination; it soon blackens with age and is cold and uninteresting while it lasts. The site for a school-house should be at least as high as the land immediately surrounding it. It should be central, easy of access, removed from every noisy, unhealthy, or dangerous establishment, and, if the soil is not free from moisture, it should be drained. The area of ground needed should be reckoned at a minimum of 1,000 square feet per scholar. The French law governing the erection of school-houses says: "The orientation of a school-building must be determined by the climate and hygienic qualities of the place where it is to be built." This is perhaps a little indefinite, as upon the exposure of the building depends greatly the quality of light and the effect of the sun's rays. It is desirable that the light by which we read during the greater part of the day should be constant

and uniform, and for this reason what I may term the working light of the school-room should come from the north. It is desirable also that the school-room should come under the influence of direct sunbeams, and for this purpose the school-room should have a southern, or better, a southeastern exposure.

Lighting is a part of school hygiene much neglected. For our guidance in the proper lighting of school-rooms, let us take into consideration some natural and scientific facts. It is a fact that the world and the objects in it are lighted from above, and that the light by which we see objects is reflected from them to the eye. Again, our eyes are protected from the intensity of the original light above them by lids, so that it may not interfere with and overcome the less powerful reflected light, and if this wise provision in the human economy was no proof we would need but the sense of an overstrained optic nerve to tell us that direct light in the eyes is injurious. Light should not come directly from the rear, for you would not turn your back to a window to read, because your head and shoulders would cast a disturbing shadow upon the page. You would involuntarily stand so that the window would be at your side and slightly to the rear. But in the act of writing you would sit so that the light would fall directly upon the moving pencil and the matter being written, thus causing the light to come from the left side.

In view of these facts, I would say that the working-light of a school-room should come from the left side and above the height of the eyes. We know that the best light from a window comes through the upper panes, because if we darken the lower half of a high window, while reading, the light is almost insensibly diminished while it is more pleasant to the eye; therefore the window heads should be as high as possible and their sills should be four feet from the floor. The angle at which light strikes the eye is, no doubt, important, and in this connection I will add one of the findings of Dr. Cohn's elaborate investigations in regard to nearsightedness among school-children in Germany. He says: "The narrower the street in which the school-house was built, the higher the opposite buildings, and the lower the story occupied by the class, the greater the number of nearsighted scholars,"—an additional proof that the window heads should be high. The width of the room has also an important effect on the light, and Dr. Javal, French ophthalmologist, was led to prefer, for all school-rooms of greater width than 13 feet, a plan by which light was admitted from two sides instead of one. In rooms of greater width, when lighted only from the left, the illumination of the most remote desks was at times inadequate for clear and comfortable vision, and of all the schools examined those which showed the greatest proportion of short-sighted pupils were some of recent construction, where the accepted theory of lighting only from the left had been most vigorously carried out. On the other hand, the statistics obtained did not indicate that any injurious effect was produced upon the eyes by cross-lighting, provided that the illumination was ample, and the school most free from myopic pupils was one in which the rooms were furnished with large windows in two sides.

The light should be concentrated, and for this purpose the windows should be separated only by the narrowest practicable mullions. To prescribe the amount of light which should be supplied to a school-room is difficult, from lack of data and the varying conditions of different rooms; but from the conclusions of those who have given much thought to the matter I think that in no case should the area of glass through which the light is supplied be less than 300 square inches to each scholar. This leads me to suggest another reason why school-rooms should be lighted from both sides. It will be found difficult

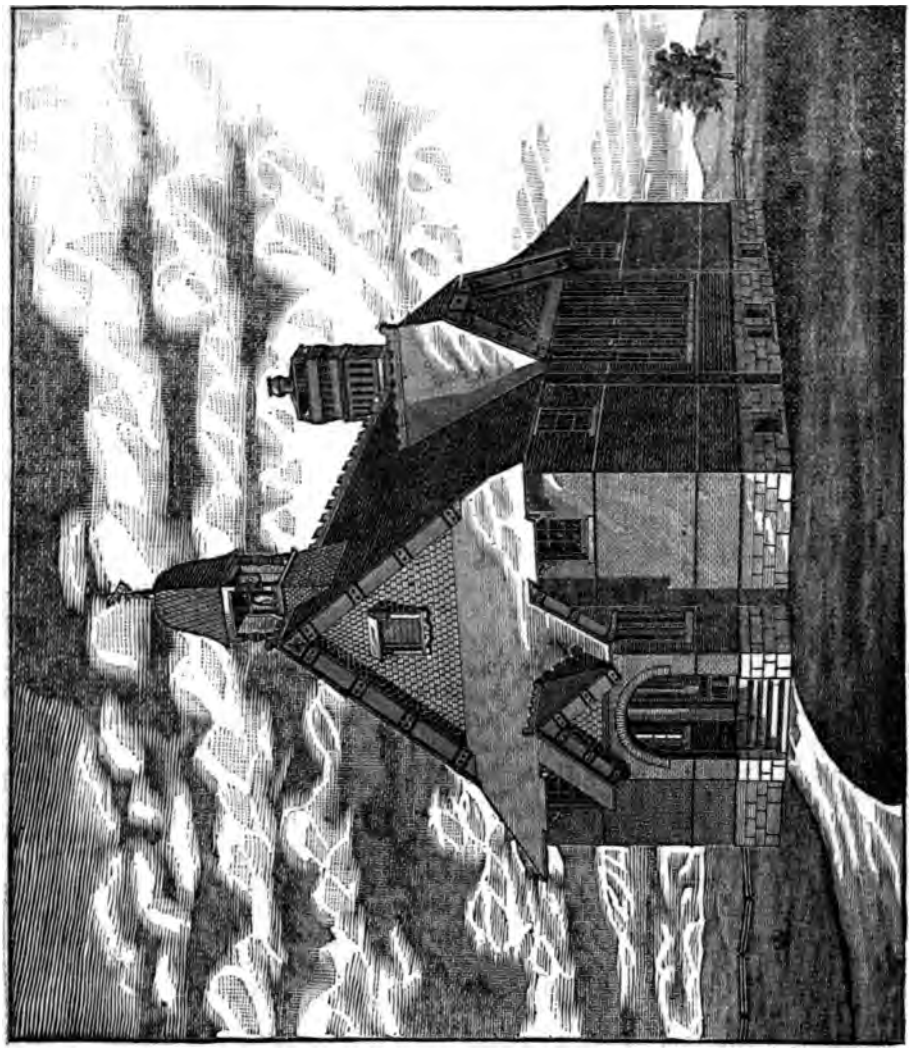
to place windows enough on one side without destroying the proportion of the room by making it too long for its width, and no windows should be placed at the rear of the pupils, because we must not injure the teacher's eyes while protecting the scholar's. The ceiling should be pure white that it may reflect any light thrown across it. The walls should be of a neutral or gray tint, calculated to soften the light, for under no circumstances should blackboards be placed between or immediately beside windows.

Heating and Ventilating.

Under this head volumes might be written, but it is my purpose to consider only the simple method of warming and ventilating by a stove, knowing full well that the so-called economy of school boards would stand like a Gibraltar to oppose the invasion of more perfect and expensive methods. They say, oh, yes! we will give you stoves, all the heat you want, and if you want to ventilate just open the windows or a door. Now, added to the fault of a red-hot stove, this and kindred ways is the manner in which our country school buildings are heated and ventilated. It is a mockery, and after all that has been written and said by physicians, sanitarians, and health organizations it seems as criminal as it is unnecessary. It *is* unnecessary because a remedy is known.

For convenience sake, suppose we are required to heat and ventilate a single school-room containing 50 scholars. If we supply to each scholar 300 cubic feet of air-space—and I consider this none too much—we would have a room containing 15,000 cubic feet. Now a stove, to heat this amount of air, should be large enough to do so without becoming red hot; therefore, it should have a large fire-pot,—I mean so large that there will be no temptation to heat it red hot, and the radiating surface should be in proportion to the fire-pot. I cannot insist too strongly upon having a large stove, for upon its size depends altogether its success as a heater, and it is obvious that a large radiating surface, moderately heated, is far more effective and healthy than a small surface heated red hot. The stove should be completely encased by a sheet iron jacket, leaving a sufficient space between it and the stove to admit the necessary amount of fresh air, which should be brought from outside the building at a point at least three feet above the ground. It should be conducted through glazed clay pipe, and introduced to the room beneath the stove, passing it between the stove and its sheet iron casing, thus warming it before it reaches the pupils. The air in the school-room should be kept moist, and for this purpose a pan of water should be placed on top of the stove, so that the fresh air in leaving it may take with it the proper amount of moisture. The casing around the stove should have a movable dome-shaped top, made of wire cloth, with meshes about one-quarter of an inch square. This will serve to check the upward current of fresh air, allowing it to become warm and gather moisture. Now that we have a supply of fresh, warm air, to make it useful, we must ventilate the room, and to do so properly, we must supply to each pupil at least 2,000 feet of fresh air each hour, and as we have 50 pupils, we must supply each hour 100,000 cubic feet of air for the entire room. The contents of our school-room is 15,000 cubic feet, therefore; we must change the entire air of the room about seven times each hour.

Before ventilating, however, let us understand the conditions under which we are to ventilate. Let us examine our room after it has been thoroughly warmed and breathed in for an hour. We find by the thermometer that the warm air is in the upper part of the room, while the floor is cold, there being a difference of perhaps fifteen degrees between the temperature at the floor



and at the level of the pupils' heads. This is in direct opposition to the laws of health and comfort. The heads of the children are hot, feverish, and perhaps aching, while their feet are cold. Finding then, that our warm, fresh air remains in the upper part of the room, what must we do to utilize it? We must draw it to the floor, there breathe it and get rid of it as quickly as possible. This cannot be done by ventilators in the ceiling, or in the side walls. The ventilators must be in the floor, and it will not suffice to provide one or two registers; we must have ventilators enough to draw the warm air down to all parts of the floor, and at the same time take out the foul, cold air already at the floor.

We must now find a power to draw the air from the room; for it will not drop through the floor of its own accord. We find that in the large chimney about our smoke pipe is a column of warm air rapidly rising; and we know that if we make an opening in the lower part of the chimney, that air would pass into it and follow the rising current. Now it is a simple matter to connect our ventilators in the floor with this opening in the chimney, by means of galvanized sheet iron ducts carried under the floor. Each ventilator must have a separate and distinct duct carried into the chimney. It will not do to make one duct serve two or more ventilators, because the registers nearest the chimney would do all the ventilating while the others did none, and parts of the room would be cold and badly ventilated.

The inlet ducts for fresh air should be of sufficient size to allow 10 square inches of sectional area for each scholar, and the ventilating ducts should together be equal to twice the sectional area of the fresh air inlet. To ventilate in summer with this apparatus it is only necessary to place a burning lamp in the chimney. This will create a warm upward current strong enough to ventilate the room.

When possible, school buildings should be provided with a good basement under the entire building. This would afford a room for the heating and ventilating apparatus, fuel, etc., and also a play room for the pupils in stormy weather. The floor might then be kept warm by the heating pipes under it, and the heat introduced to the school room at the floor level, where it would do most good. When a cellar cannot be had, the floor should be at least two feet above the ground, to admit of a free passage of air under it.

The foundations should consist of good stone work laid in cement mortar. They should be started on concrete footings. The walls above the underpinnings should be of sound, well burned brick, containing a continuous hollow space of four inches to insure dryness. The roof should be covered with slate or tiles. The floors should be of maple, this wood being tough and lasting, and less liable to resound when walked upon. To further prevent resonance, and to add to the warmth of the floors, they should be lined with a mortar filling, laid on a rough floor between 1¼x2 inch flooring strips which receive the finished floor.

To accompany this article I have prepared a plan embodying the principles here presented, which I hope may prove useful. With some exceptions the plan of heating and ventilating is one recommended by Dr. Kedzie and others, and I think for a one-room building, combines economy with effectiveness.

Let us hope that before your next meeting steps will have been taken, which, if they do not secure elegant, lasting buildings, will insure healthful conditions in our schools.

COUNTRY SCHOOL-HOUSES.

THIRD PAPER.

BY A. J. DANIELS.

A suitable site on which to erect a school-house is of first importance, and every reason that can be adduced for the exercise of care, and good judgment in the selection of a site for a dwelling house holds with still greater force here.

Outside of large cities the cost of an acre of land is so trifling an expense that it ought hardly to have any consideration in a matter of so great importance, and yet it has been thought of sufficient account to cause a large part of country school-houses to be placed in most unfavorable positions, and often on plats of ground of barely sufficient size for the house and necessary out buildings.

To pursue such a course is false economy. The people can well afford at least an acre of ground for school purposes, and this is none too much for the necessary buildings, play grounds, and for ornamental purposes. And they can afford, too, that this acre shall be situated where the surroundings are the most favorable that can be found in all respects, where there will be no exposure to health from malarial influences, where nature will best unite with art in making the grounds attractive, where the light of the sun, that best of all disinfectants, can impart its influence during the entire day. To be more specific, it should be on grounds slightly elevated, and of a character that will pack readily under usage, and as far as possible removed from swamps or standing water.

A house with a southern exposure will furnish during a great portion of the year a very desirable shield against cold north winds, and when so situated the approach to the entrances can be made with the least discomfort. Such an exposure cannot always be obtained, but when it can be made it will be found to add greatly to the comfort of the children during their necessary detention upon the school grounds. Next to this an eastern or western exposure is preferable to a northern, which should always be avoided if possible. All other things being equal a site on the north side of a road running east and west is to be desired, and we will suppose the house hereafter referred to so situated.

For the accommodation of a district in which the average attendance is about forty pupils, provision should be made for seating not less than sixty. For a school of this size a room thirty-six feet long, twenty-eight feet wide, and twelve feet high, with additional rooms for wardrobes, will be required. In this house, located on the site we have chosen, with its south side, not end, toward the road, the pupils will sit facing the west. There will be two entrances, one for boys at the southwest corner, and another for the girls at the southeast corner. The reasons for this arrangement of the doors are apparent: the boys enter near the teacher who can easily reach the hall and wardrobe, while the girls in entering at the rear will not need to pass in front of the school to reach their seats.

These entrances may be either at the extreme ends of the side of the house, or in the ends of the house near the side, or one may be in the end and the

other in the side; in either case they should be from the wardrobes, which may be added to the main building in such a way as to improve its appearance. From the rear of the wardrobes and connected with them should extend latticed passages to the privies, which should be at the ends and a few feet removed from the house. This arrangement will allow pupils to pass into the wardrobe first, and then through the front door to the play ground, or through the rear door to the privies, unobserved by others.

Four windows on each side of the house, three feet in width and extending from near the ceiling to within four feet of the floor, will admit all the light required. It will be better to place these in clusters near the centers of the two sides rather than to divide the space, not occupied by the windows, equally between them. This arrangement will bring the windows not directly at the right and left of the school when seated at their desks but a little in front, which is a better arrangement so long as they are not directly facing the pupils. Curtains such as will allow the light to pass through, but which at the same time will cut off the glare of the sun's rays will be necessary on one side of the room.

The location of the stove will depend to some extent on the orientation of the house. In the one under consideration, the most suitable place will be in the northwest corner. If placed here it will be more directly under the control of the teacher, will be near the fuel and so far distant as not to cause discomfort to the pupils. A box-stove of large size, surmounted by a horizontal, cylindrical drum will furnish the necessary heat. The stove should be surrounded by a jacket of sheet iron extending from the floor to the top of the stove, leaving a passage between the stove and jacket of six or eight inches. Underneath the stove there should be an opening through the floor of not less than one foot square for the admission of fresh air. This opening should lead to a fresh air duct extending underneath the floor from the front to the rear of the house. The duct can be made between two joists placed at a suitable distance and ceiled below with matched flooring.

The ventilation of any school-room must depend largely on the teacher, but to some extent it may be made to act independently whenever it is necessary to have fire for heating the house. To accomplish this a square brick chimney should be built from the ground with a smooth flue of not less than twenty inches square. In the center of this flue and extending the entire length should be placed a galvanized iron pipe of two inches greater diameter than that of the pipe from the stove. At a suitable height, by means of a T, this pipe should be connected through a thimble in the chimney with the pipe from the stove. An elevated hood of galvanized iron, above the chimney, will be necessary for the protection of the interior pipe. The heat of the pipe will warm the surrounding air in the shaft, and it will only be necessary to connect this column of air with the air of the room to produce an upward current through the flue. How can this connection best be made? By making an opening in the flue within the room and on a level with the floor the air will escape from that part nearest the chimney, but no change will take place at the remote parts of the room. This plan may be satisfactory in a dwelling house, but will be found insufficient for a school-room. It is obvious that the desks and clothing of the pupils will prevent the free passage of air from the lower part of the room to any one place of exit, hence it is necessary to provide means for the foul air to escape at several points between the rows of seats. For this purpose openings one foot square and four or six in number,

distributed over the space occupied by the pupils, should be made through the floor and, by means of conductors made of boards planed on the inside, or, what is better, of tin, connected with the ventilating flue. These ducts should lead directly without any angles to the base of the chimney, otherwise the current will be through those openings in the floor only which are nearest the flue. The foul air-ducts converging toward one point may enter a sheet iron case which may taper to a size that can be entered through an opening in the chimney just under the floor joist. The openings in the floor should be in the aisles, and across the same should be placed one-fourth inch iron rods one inch apart. These rods may be inserted in a movable frame which may be lifted out whenever it becomes necessary for the removal of articles that will fall through the same. The bottom of the smoke flue should be on a level with the floor of the room, and by means of an elbow be brought through the wall, flush with the outer surface of the chimney through which ashes and soot may be removed.

This plan for ventilating a school-room will be found to be an important addition to the ordinary means by doors and windows, which in cold and stormy weather are liable to be kept closed most of the time. It is only by throwing open these that a complete change in the air of the room can be quickly effected, and this course for driving out the impure air three or four times each day should not be omitted on the supposition that any other plan is sufficient. This plan, however, will not be resorted to unless the windows are hung with weights, or the two sashes balanced on pulleys, and so adjusted as to be moved with a mere touch.

ORNAMENTING SCHOOL GROUNDS.*

DISCUSSION.

BY F. S. FITCH, JR.

In considering the subject of the ornamentation of school-grounds, the first thought that presents itself to me is that the exaggeration of a fault is not the best means for its correction. In our work of teaching we have all had opportunity to see that, in order to secure earnest effort toward improvement, we need to recognize any efforts in the right direction however feeble they may be.

In uttering a few words, which may, perchance, reach some of the teachers and patrons of our country schools, I am, in justice, compelled to say that I have seen a marked improvement in country school-houses and even in school grounds in the last ten or twelve years. It is possible that the section of country with which I am familiar has been specially favored; but, at any rate, it is true that since leaving the farm and the district school I have seen each year, on returning home, some new evidence of improvement. The old log or clapboard school-house, standing almost in the highway, with no fence nor playground, has, in many places, given way to more neatly-built frame or brick buildings, some with bell-towers upon them and many with fenced yards.

* NOTE.—The consideration of this subject was opened in an extemporaneous address by O. W. Garfield. His remarks have not been furnished for publication.

We should enter upon the consideration of this question not with a blind spirit of fault-finding, but with one of frankness, so that, by recognizing merits where they actually exist, we may find more patient listeners when we criticise the faults that deserve criticism.

I am not an enthusiast upon this subject, neither am I content with the existing state of things. I believe that in this, as in all reforms, a medium course is not only most tenable but will be followed by the best results. The surroundings of our country schools are neither so bad as they have been nor so good as they ought to be. The first part of this proposition must be apparent to all who take a comprehensive view of the facts; the second part will need to be proved to some.

And here the first obstacle that presents itself has its foundation in those words of the philosopher, the truth of which experience proves to all and history repeats again and again: "Man is a *reasoning* but not a *reasonable* creature." Even in this intensely utilitarian age, when mammon is the god of the multitude, there is not one of those who deny the need of improvement in the surroundings of our district schools who does not contradict in practice what he maintains in theory; who does not show by the ornamentation of his own home, within or without, that he believes in that very cultivation of the beautiful the utility of which he denies when applied to the common home of the children of the community, the school, where the greater part of childhood's days are spent and the most indellible impressions are made upon the mind of the girl and boy; and yet, when there are so many who maintain that any one who knows the "three R's" will suffice for a teacher, it is not strange that some should say that anything which keeps out the cold will answer for a school-house, and, as for grounds, the children can play in the road. Absurd as these ideas may seem to us, they are the opinions of too many.

But even the implements which the mechanic and farmer use in their daily labor are a contradiction of this theory. For why should they pay a greatly enhanced price for the polished ax or scythe, for highly finished tools of every description, when the greater part of the labor of finishing adds not a particle to the efficiency of the tool? It is a trite saying that "what is sauce for the goose is sauce for the gander," and surely, according to the theory of these economical people, this labor of making implements attractive to the eye is entirely superfluous and ought to be dispensed with. But they pay for such labor without a murmur, although it adds a large percentage, and in many cases half, to the price of their plows, their machines, their tools of all kinds, their wagons and carriages, and even to the clothing which they wear. It is said that no other nation manufactures so highly finished farming implements as the American.

This, of course, would not be the case if they were not also willing to pay for the same. Surely where one argument can be advanced for highly finished farming implements, a hundred better reasons can be urged for better school grounds.

Throughout the greater part of its extent, our State has laid aside its old garments for a new and more attractive dress. The log house has been replaced by the tasty frame cottage or the elegant brick mansion. The country has passed from what we might call its Doric to its Ionic period of architecture. And still the manner of construction of the house is but one of the many signs of the growth of civilization, in this important direction, the cultivation of the beautiful. The architecture of the house has its counterpart both in the beautiful pictures, the ornamented walls, the elegant carpets and furni-

ture within, and the inviting lawns, the cool shade and the fragrant flowers without. And yet what a contrast between even the meanest home in the community with its outward or inward manifestations of some aspiration, at least, toward the beautiful, and the school-house of our day and generation with its bare walls, smoked by a defective stovepipe, its desks whittled and scarred, its front exhibiting ugly and obscene characters that send a feeling of pain and disgust to the heart, and a blush to the cheek of the passer-by, while around it is a barren waste with scarcely a tree or green plat of grass to greet the eye, where even the efforts of nature to make some amends for the selfish negligence of man are thwarted by ever-active feet and destructive hands. What wonder is it that pupils are destructive? Is it their fault? Certainly not. The wonder would be if such surroundings did not make even the worst more depraved. Their characters are but just being formed; and, what is more to be deplored, they are at the most susceptible period of life, and the impressions now made upon their hearts and minds will abide for all time. We should expect them not to set examples of neatness and care, but to imitate what they see about them; and it is but natural that where they see nothing cared for they will care for nothing. As a general rule, children do not disgrace their bringing up. At home, as is the parent, so is the child; and although the influences of home are checked and repressed for years, they will show their effects even in manhood or old age.

As is the teacher, so is the school. I must, in justice, charge upon teachers much of the fault in the neglected and repulsive appearance of district schools. I believe there is no case so hopeless that it cannot be improved by the teacher, if only he enlists the support and sympathy of his pupils. With the successful teacher the moral natures of his pupils are like clay in the hands of the potter. The teacher that cannot, even in the most barren soil, create some love for the good, the true, and the beautiful, is a failure and has missed his calling. He, like other men, must be judged by the light that is given him. The old ideas of enforcing obedience always by the rod, and inculcating moral lessons by catechism or by force, have fortunately been dispelled before the advancing light of civilization, and the world is recognizing the fact that it is the duty of parent and teacher alike to make school attractive.

I charge upon those who have made school-houses and their surroundings ugly and repulsive, and, by a niggardly policy, have denied to pupils a playground and forced them to become trespassers upon neighboring fields for their sports: first, a cultivation of a disregard for the property and rights of others; second, the exclusion of many from school advantages who have no wise restraint at home to keep them in school when they have once grown to dislike it; third, as a result of what I have already mentioned, the filling of our streets with vagrant children and our penetentiaries with convicts.

Who that beholds the existing state of things can deny for a moment that there is urgent need of improvement in the construction and surroundings of country schools. Moreover the surroundings of many of our village and city schools are quite suggestive of a similar need. Certainly, to deny it requires that one take no thought whatever upon the subject; and this is just what a large majority of parents and even teachers are doing.

It is a constant and just complaint of teachers, that parents visit the school so little and give so little attention to the instruction of their children. Surely they are apparently more indifferent about the mental and moral welfare of their children than about the care of their hogs and horses; for what one of these indifferent parents would entrust the sole and exclusive care

of his stock to a publicly employed servant, about whose qualifications he knew nothing personally, without giving early and frequent personal inspection to the work? Yet here is a matter about which many teachers take just as little thought. I mean the cultivation of something more than the intellectual nature of the pupil.

But what is the purpose of these remarks? I answer, to show the need of awakening a livelier interest in this subject. As with laws, so with reforms; they cannot go far in advance of public opinion. So in this matter, we need to create a public opinion in favor of the reform. And the first means of accomplishing this result is the discussion of the subject at these conventions. It is no reason for self-congratulation on the part of this Association that the Horticultural Society of the State has been compelled to take the initiative in a matter which bears so intimate and so important a relation to the work of education.

The course taken by that society is, in my opinion, the right one. The result of its negotiation with D. M. Ferry & Co., and its circular distributed among the teachers of the State has been a successful step taken in the right direction. Eighty-one school districts have seen a practical test of this experiment and have seen it succeed. This in itself is a conclusive answer to the objection which is always first raised against such a scheme, namely, that it is visionary and impracticable. The trial has shown that by a teacher who has the will and energy to succeed, supported, of course, by some taste for the beautiful, *something* can be done in the right direction.

We must not wait, as some may urge, for the growth of an enlightened public opinion. Right here must the work begin. This society must take the first step, the individual teacher the second, and I believe the people will respond. From this center, as from the heart, a quickening interest will flow through all the veins of society, will permeate every school district throughout the length and breadth of the State.

It is true that, with few exceptions, too little ground is given for school purposes. So niggardly are the environs of the district school-house that one would suppose the ground had been valued by the foot, as in large cities. What a strange anomaly it is that in cities school grounds are larger than in the country; yet it is true that the extent of school grounds is generally in inverse proportion to the value of the land.

No extensive plan of landscape gardening can be put into execution on grounds so limited. Yet we need not decline to make any effort at all simply because obstacles are in the way. The men who attain to the highest success in every field are those who make the best of existing circumstances. There are few districts, I think, that can not be induced, by well-directed argument and persuasion, to fence school grounds; certainly there is no school-yard that cannot be adorned to some extent with native forest trees and flowers when once it is fenced.

I have resolved to leave to my colleague, who is more able than I to give instructions in this field, the exposition of a general plan for laying out school grounds and arranging trees. I would, however, suggest this: that every school district should devote at least two acres for school grounds, and that it should secure the services of some landscape gardener, or at least a person of taste, to draw up a plan for ornamenting the grounds.

But I am aware that most teachers must take things as they find them, and that something more practical must be said for their benefit.

All thinking men must agree that it is fortunate for man that the torrents

were not bridged for him by nature before his creation, that the mountains were not tunneled, that the earth does not unlock her treasures, nor nature disclose her secrets without a struggle on his part; in short, that he is encompassed by obstacles on every hand by overcoming which his moral, intellectual, and physical nature is developed. Without these obstacles, the human race would soon degenerate into a race of pigmies. So I maintain that there is a bright side to this dark picture of ornamenting school grounds. It is certainly better to have the pupils assist in setting out trees and making flower beds than to have the work done for them by the district, for, in the first place, there will be a strong feeling among them against destroying what their own hands have done—a feeling that will do more to protect trees and flowers than the Argus eye of the most vigilant teacher; second, by working together upon a common task, teacher and pupil are bound together by the strongest ties of a common interest. Again, it furnishes the teacher an excellent opportunity to gain access to the heart and exert an influence for good upon the moral nature of the pupil. Finally, it affords material for practical lessons in botany which will remain in the mind long after the lesson from the printed page is forgotten.

Let the teacher divide the pupils into sections and assign to each section a separate part of the work, the making and care of a certain flower bed, which is to be their own; the planting of an evergreen or native forest tree, which shall be known as theirs. So much can be done by all. This will encourage a generous and healthful spirit of emulation; it will teach them to regard the rights and property of others; it will make each a guardian of the grounds; and last, but by no means least, it will create in them a love and appreciation of the beautiful—a truly essential part of a perfect education—for, as Russell says, "the vital part of human culture is not that which makes man what he is intellectually, but that which makes him what he is in heart, life, and character." I say to the utilitarian and practical man, "You are giving your children a one-sided education; you are cultivating the mind but neglecting the heart, the mainspring of all human actions." I ask him, "Why do you educate your children at all?" The intensely practical man will respond: "To make them successful in business." But when he searches his heart for the deepest, the broadest, and most patriotic motive—the motive which both supports our system of free education and lies at the foundation of our form of government—he will answer: "To make them good citizens." Then, I reply in the words of A. D. Mayo: "The common school is the place, of all others, to inculcate the great industrial, social, and civic virtues of honesty, chastity, truthfulness, justice, responsibility for social order, all moral safeguards of National life."

SCIENCE IN PRIMARY SCHOOLS.

BY H. R. PATTENGILL.

Zoölogy, Botany, and Mineralogy! What a formidable triplet to propose for part of the primary school curriculum! But if we understand the situation, it is the province of this paper to show, 1st, why these studies should be begun in the primary grades, and 2nd, what methods should be employed in teaching them.

Let us say at the outset that we lay no claim to eminent originality in this paper. The facts in the case are that we could not be original even if we knew enough. We cannot take oath, as does the intelligent juror, that we had not heard of this question before being summoned, and that we had read no paper nor article treating of the subject, and however cursory may have been that reading, and however sieve-like our memory, some of the ideas advanced have we hope been incorporated and have taken up their abode with us. Besides, there is a common stock of first facts in education, principles that have been so long formulated that we absorb them without asking whose they are or whence they come, very much as we gather in the apples that hang over the roadside fence.

So much by way of letting ourselves down easily. Now for the question in hand.

Why should the sciences be taught in the first three years of school life? The time has been, perhaps within the memory of people now living, when a paper on this topic would have had to show why the sciences should be studied at all in our graded schools, or why they should receive very much attention in higher schools.

That the languages and mathematics should have been regarded as the only true discipline of the mind, and that the natural sciences were simply matter of interest was perhaps due to the mode of instruction in each. Let us study the sciences as thoroughly and as systematically as we study the languages or mathematics, and there is no reason to believe that the results will not be fully as profitable.

At a certain age in the child's life, usually the day after he is five, the little fellow is equipped with slate and pencil, and perhaps a picture primer, and bundled off to school, generally for the avowed purpose of relieving the strain at home. He has left his hobby-horse and house blocks, his explorations into and examinations of all curious things at home to finish his education at school. Is he to finish as he has begun? Shall he ride his hobbies, or shall he sit by to watch the teacher cavort on a favorite steed? Shall he go on building with his blocks, or is he to furnish the head and the teacher to exercise his ingenuity in moulding it into a beautiful block? Shall he go on with his exploring, and examining, using all his senses and developing his perceptive powers? Why not? What is education? James Mill, in the Encyclopædia Britannica, says "The end of education is to render the individual, as much as possible, an instrument of happinesss, first to himself, next to other beings." Bain thinks that the above definition should be given as an amended answer to the Westminster Catechism, what is the chief end of man? That definition certainly reaches beyond the sphere of school work. To fulfill its requirements the individual must possess in addition to brain power a warm heart and genial nature.

The German idea of education is, "The harmonious and equable evolution of the human powers," which means, we suppose, development of the mental, moral, and physical being. John Stuart Mill says, "Education is the culture which each generation gives to its successors in order to qualify them for at least keeping up, and if possible raising the improvement which has been attained." Another author has it that education is the means of building up the acquired powers of human beings.

In all these definitions the end in view seems to be not so much the cramming with information as the training of all the faculties. The furnishing the child with tools, and putting him in the way of continuing his

educational work throughout life. Now what course shall we pursue, what method shall we adopt best to meet these requirments and make of our pupils the most efficient citizens?

Some one has said that the beginning is one-half of the whole. In nothing is this truer than in education. The way in which this hobby-horse boy is treated in the first three years of his school life will more than half tell the story. The fundamental objects of primary instruction are, as we believe, to train the senses, to cultivate the perceptions, to discipline the memory by training to attention.

We believe that a great deal of time is now wasted on arithmetic in primary grades; yes, even with the improved methods of teaching it to primary pupils. Although the analysis bugbear has been nearly banished, we still believe there is too much of the combinations by 2's, 3's, etc., backward, forward, over, through, and under. Not that there is too much arithmetic taught, but that it is taught at the wrong time. It's like digging a cellar while the frost is in the ground; it takes longer to dig it, and when the frost comes out the work must be done again.

Now, although the *reasoning* powers of the child from 6 to 10, should not be subjected to severe discipline, the perceptive powers may be brought into extraordinary activity; and what is better for the developing and cultivating these faculties than the common objects of nature everywhere about us? Animals, plants, and rocks. The child has been in friendly intercourse with them previous to beginning his school life. The baby lying in his crib shows a spirit of investigation and inquiry in regard to all its surroundings. This inquisitive disposition does not perceptibly diminish during the years of childhood, and with some it seems to strengthen as the years glide by. Now if the teacher can only guide this inquiring nature, if she can so direct these observations as to make of them systematic study, pleasant recreation, and interesting recitations, the child will not have left his blocks and hobby-horse in vain. Can this be done? We believe it can.

There can be no doubt but that subjects of this kind are interesting to beginners, and if for no other reason they should be studied at the outset.

How many children are made to hate school at the very threshold by the abrupt and unpleasant change from their free home-life and their study of natural objects to the "demmed horrid grind" of A, B, C, and the multiplication table!

Who wonders that they become uneasy and unmanageable, when the only comfort they get out of it is the chance for mischief which it affords?

Aside from the interest which the study of the natural sciences affords, they are most useful in training the senses, which is another highly important factor in education.

Some people spend fortunes in traveling, and seem to travel solely for the purpose of spending money. They go to certain places of interest and beauty because it is the thing to do. They don't see a tenth part of the beauty or the interest, and they could not if they had the desire. They don't know how. Nearly every boy and girl in your school has seen both horses and elephants time and again. Ask them in what important particular the hind leg of the horse differs from that of the elephant, and note how many out of every ten can tell from his own observation. Flies are by no means exceedingly rare, and yet how many people in every one hundred can tell how many legs each one of the pests has? Do you say "It doesn't matter particularly as long as we know that each is well supplied?" But if the child has learned to look carefully

and critically at objects of this sort, when he comes to use these powers for more advanced work, we shall find that this drill is of manifest use and of incalculable assistance in acquiring the necessary knowledge on which to base his reasoning.

Teach the pupil to scan carefully and with design every object which properly comes within his survey. Not so much for the practical use which a knowledge of these things give, but to better fit the youth for future work. This is only one way of training to attention, and attention is the basis of memory, and memory is the basis of reasoning. By orderly and systematic work, by bringing lessons on in closely related sequence, the memory of the pupil will be disciplined and improved much more than by the system of rote recitation, or by attempting to drill the reasoning powers of the child by lessons in arithmetic. The study of the sciences in the primary grades may and should be the basis of subsequent work. Incidentally the work in the sciences may be made of great use in teaching language or expression. At the time when we are training the pupil to observe we should also give careful attention to the manner of expressing the results of these observations. The writing and speaking about these subjects of interest can be made of prime importance in the language course.

All the foregoing reasons have been in the line of mind development, of training the intellect; now a word about the practical use of the subjects. We do not wish to ride this hobby too hard, and do not belong to the class that would exclude all but the so-called practical studies from our schools; but we do think that the claims for a practical education should receive some attention even in primary grades.

What is more to the purpose than a knowledge of the everyday things about us—to know the destructive insects, the habits of domestic animals, the structure of the human body, the kinds of woods, the useful grasses, the noxious weeds, the poisonous plants, the growth of seeds, and the various kinds of soil adapted to our needs?

As to our second division, how shall we pursue the study in the early grades of school life? The great objection that has been made to beginning the study of these subjects so early in the school course is, that it is very apt to be simply the memorizing of a list of incomprehensible terms. Now when we venture to speak of object-lessons in this connection don't get disgusted and say: "There's that old object-lesson hobby—must we witness still another display on that steed?" Yes, that is our cool-blooded design, for without the help of them we can never make teaching the sciences a success. The term object-lesson is "mighty onsartin," as Uncle Remus said about the mule. One teacher we have heard of who became so thoroughly convinced of the great value of "object-lessons," that she furnished her class with an object-lesson manual, and gave out a lesson each day till the book was mastered. Let us be careful that our hobby is a "thoroughbred" and that we know how to manage him.

One highly important thing in object-lessons is that each lesson should have a definite end in view, and should be closely related to the lessons immediately preceding and following it. "Hit or miss" object-lessons generally miss. The teacher must have arranged a well defined course to pursue, and a definite end in view before she begins to deal with object-lessons.

Of the three studies named at the beginning of this paper botany is no doubt the most convenient for study in all places and under all circumstances. The child, however, is better acquainted with domestic animals and may per-

haps do better if taught to study them first. As our schools all begin the year in the fall, we might profitably begin the first term of the first year with short lessons on the plants and animals. In the study of plants we may consider the leaf, stem, root, flower, and seed in order. In the study of the leaf, as in any object-lesson, the great difficulty lies in getting the pupil to observe for himself the points which you desire brought out. To tell the pupil as little as possible and get him to tell you as much as possible is the great desideratum as an object lesson. Do not spend time in an object lesson bringing out facts and qualities with which the pupil has been perfectly familiar from his youth up.

Here is a specimen brick: We once heard an object-lesson somewhat like the following: Teacher, seizing a stray ink-stand, said to her pupils: "Scholars, I have in my hand an ink-bottle." We can barely imagine the gasps of astonishment with which the alarming statement was received. The teacher continued: "What is this that I have in my hand?" "A nink-bottle," responds the excited class. "It is made of glass," the teacher continues, at which remarkably fresh piece of information the astonished class gasped again. "What is it made of, children?" "Glass." "Yes, that's right; glass is good to see through,—what do you do with glass?" And the obedient little fellows echo, "See through it." Then with a few questions in regard to spelling the words named, the object lesson for that day is done and the pupils are dismissed with a caution not to forget about what they have learned till to-morrow.

But what shall we do with the leaf which we have before the primary grade for object lesson? We must travel cautiously, call attention to its form in general, then to its parts, stem, blade, petiole; have other leaves at hand for comparison, let the pupil select the parts in other leaves; call attention to the edges, whether notched or not. It does not seem to us as if it were quite the thing to teach many of the scientific or technical words of the sciences at so early an age, for ere we are aware the pupil will be learning a great number of terms without the slightest idea as to their use; but simply getting him to note the difference in the edges of leaves, and how some notches point toward the tip of the leaf and some do not; how some leaves have deep divisions in them while others are entire. The little veins in the leaf will quickly attract attention, and by comparison the pupil will soon learn to note the difference between the veins of such leaves as the lily and the maple. This distinction, enforced and enlarged upon, may grow into learning the definitions of endogen and exogen. Let the class bring in leaves that resemble each other in their edges, others classified as to shape, etc. Again bring in leaves with short stems, or none, and leaves with long stems. In the winter term of the first year, when plants are not so easily obtained, we can turn more particularly to the study of animals. Take up, first, some animal that the little fellows are already acquainted with, not for the purpose of informing them that it is a cat and has four legs, but with the end to bring out the characteristics of the cat family of animals proceed with the study. Talk of its fur, whiskers, claws, teeth, tongue; its habits, food; how it walks, eats, sleeps, drinks, purrs, and fights. Compare with it the dog in regard to all these various qualities; their flesh-eating habits and proclivities. Take up the study of various parts of the human body; our principal bones and organs. Compare our hands and feet with feet of dog and cat. Continue lessons on animals, in the same way, with respect to cow and horse. Let pupil, by careful examination, describe the points of difference noted; in shape, covering, food, habits, use, ears, eyes, teeth, and tongue. Compare these with dog and cat, especially with regard

to food and habits. Thus lay foundation for correct understanding some of terms carnivorous and herbivorous.

In the spring term of the first year, when the young plants begin to show themselves, resume the study of leaves; take up study of stems, cylindrical, triangular, and flat; smooth, hairy, sticky, branched, and leafy; roots, bulbs, tubers, fibers, etc. The study of the flower as a whole may be begun at this time; but any attempt at analysis or classification is better suited to a later stage.

In all these exercises, a patient, thorough study of some one thing is much to be preferred to cursory and superficial study. We really believe that by a careful series of lessons, given with special reference to certain great classes of plants, that by the close of the third school-year the pupil will readily distinguish exogens and endogens by flowers, leaves, and stalks. He may be taught the method of growth of seeds by actual tests of various sorts in the school-room or at home. He can easily learn how seeds are distributed. The thistle, the burdock, and beggar's tick are striking object-lessons to many a little idler.

In the study of animals, the great distinctions of vertebrates, mollusks, insects, and worms may be learned; also, the classes of vertebrates, mammals, birds, fishes, and reptiles. At least so arrange the lessons under these topics that some of these classes will be definitely fixed by the pupil, and thus his studies will not only train his observing faculties, but he will step up to the higher grades with a good foundation to build upon. Let us see that this one point is emphasized, that no object lesson fills its mission unless it is given in accordance with a preconceived plan of progress toward some definite end.

We have thus far spoken only of the study of plants and animals. The study of rocks in some localities is exceedingly difficult on account of their scarcity, and furthermore their lack of life robs them of interest to the primary pupil, and yet pupils take great interest in collecting them, and that too for other purposes than for throwing at frogs or shying at birds. With care the pupil may be taught to classify his collections into limestones, sandstones, granites, and conglomerates.

We are well aware of the danger in the course we have recommended, viz.: That of making the pupil a little parrot to jabber back to us the unmeaning words he may have caught from our hasty object lessons, of the proneness we have of running the teaching of sciences into a mere collection of specimens, and gauging our progress by the number of leaves or flowers in our collection, or the number of transfixed beetles or bugs.

"Art may err, but nature cannot miss," and it verily seems that here is a field for the apt teacher to display his hobby. The study of the beautiful things about us cannot but be ennobling to the pupil.

> "Eye nature's walks, shoot folly as it flies,
> And catch the manners living as they rise."

The child that learns to use his senses, who has been taught some of the first principles of observation, has with him a constant source of pleasure through life. He is enabled by means of his knowledge to see a thousand beautiful and interesting things in the every day life he leads (witness Mr. Sill and his spiders). As the boy drives home the cows from the pasture, as he rambles through the woods for pleasure, as he travels over the fields to labor, or as he lies in the shade to rest, by simply using his eyes he may read many interesting chapters from nature's great open book, and the person who thus

becomes intimate with the true, the beautiful, and the good cannot become a bad citizen.

"Slave to no sect, who takes no private road,
But looks through nature up to nature's God."

DISCUSSION OF THE PRECEDING PAPER.

E. A. STRONG said:

1. The great defect of our public schools, of all kinds and grades, seems to me to consist in the fact that the English language is so imperfectly used and taught in them. I believe we are most of us prepared to join in the cry which is rising from every side. Let us improve our methods and set before ourselves a higher ideal of instruction in the right use of our own tongue.

2. The defect (and consequently the need) of our schools, which should stand second in order of importance, forms the subject of the paper to which we have just listened. Here, however, the case seems somewhat different from the former. In all our schools there is instruction—there is even some systematic instruction—in the English language. We complain only that there is not enough, and that what there is is not good enough. But with regard to natural history there is not only no systematic instruction in our lower schools, there is none whatever, of any kind or degree. These lower schools seem to be on so high a plane that the things of time and sense find no place in them. Pupils are taught in these schools precisely as they would be taught if they lived on the moon or on the planet Jupiter; or as if there were no external world and they had no means of communication with it. There are those of us who would see this state of things changed—who find children possessed of senses to be cultivated and surrounded by objects of sense adapted to such cultivation.

3. Of course this is no argument for the introduction of natural science into the schools. Such an argument must be founded upon the precise function of the public schools (if that can be ascertained) and must proceed to show that the study of natural history is necessary to the exercise of this function. It is not enough to show that a subject of study is adapted to children, or that it is useful, or important, or even that it is necessary to the well-being of society. The argument must be more definite. For what purpose does the State establish schools? Is the subject to be introduced not only in accordance with this object but vitally necessary to it? Indeed we must inquire whether it is more important than something which it must displace. Further, is it adapted to school instruction? Is it a universal need? May we not safely trust some other agency to supply the defect? Or, indeed, may we not trust to the sure teaching of time and experience and those incidental aids which surround us on every side and which supplement and often seem about to supplant our public schools? I should like to hear a complete argument on this head, for I believe that if we have the argument we shall finally have the case. The common schools are slow about taking up a new subject and equally slow about giving up an old one—wisely slow perhaps. But I believe that when we knock at the door of the district school-house armed with the proper credentials we shall gain admittance. Now in this matter of natural history, it seems to me that we have the argument; that we can make out our case with the people; and, armed with the proper credentials in the form of State authority we may hope one day to see systematic instruction in science fully established in the common schools.

4. But in the meantime what can be done. First we can agitate, scold, and persuade. If anything is to be done for the schools we must get the people to want it done. Even those who are here this afternoon, if fully persuaded in their own minds, and willing to put forth a little effort to that end, may alone establish this reform in our State.

5. But while this reform is in the stage of incubation, something may be done for the schools as they are:

a. We may be careful not to prejudice the case by introducing false issues and wrong methods. Especially can we prevent the threatened substitution of rhetorical science and sentimental science for actual scientific work. We can insist that we are not clamoring for the introduction of more text-books into the common schools or the addition of a single line to the already crowded scheme of exercises. We can show that all that is good in the old curriculum can be conserved while granting all that is claimed for natural science.

b. Most important of, all we can do something toward securing teachers who have some knowledge of and some enthusiasm for science. This is the critical point. This point gained, all is gained: this lost, all is lost. At present it seems to me that instruction in natural science must be mainly desultory and out of school hours. A hint or question concerning something to be done or seen, an occasional hour with the microscope, a suggestive conversation, a fruitful walk or expedition, are all that can be attempted at present in most district schools. Nor is this little, if rightly done. The only condition of success is a teacher in sympathy with such studies.

c. Something may also be done by urging the purchase of working rather than merely illustrative apparatus in such schools as purchase any apparatus at all.

d. Those who favor the reform will need to give some attention to the district library or the school library wherever situated. Some scientific works of the right kind will be found useful with the best teaching and indispensable with the poorest.

FROM COUNTY INSTITUTE TO COUNTY NORMAL.

BY J. G. PLOWMAN.

Criticism is kind and just, recognizing merit with pleasure, and observing defect that it may be remedied. The county institute system has accomplished a good work. It has brought the masses of teachers together and awakened the idea of method; it has moved upon the people, and has made more honorable our profession; it has brought us in contact with the sentiment of the press and made us more practical; it has brought us face to face with the people outside of our profession and has made us more sensible; in short, it has done very much towards establishing that true relation which ought to exist between us and the people whom we serve. It has also made us more enthusiastic in our work, and consequently a better grade of work has been accomplished by us. But commendation must give way on this occasion to the examination of defects and to the advocating of what we deem ideas of progression.

Our institutes always close just at the time when we are fairly at work, hence

the ranks are never satisfactory to instructors, teachers, or people. This has a tendency to make the public think that the institute is held because it is a legal requirement, and not because it is designed to benefit the people or improve the teachers in their professional work. They also look at the expense of the five-days' effort, and it seems to them unreasonable.

Some of us who have sacrificed a whole vacation for a few days' institute work and been paid at the rate of seventy-five cents on a dollar are quite certain that it is unreasonable. It not infrequently happens that a five-days' institute costs from a hundred and fifty to two hundred dollars, and no parties except the railroad and steamship companies make anything at that. The brevity of time will not permit anything more than the merest outline of a subject, so, of necessity, there is from year to year, to quite an extent, a repetition of the matter presented. This has become exceedingly stale to those who are loyal to the work of teaching and attend all the institutes in their respective counties. I know that we may be met with the remark that this class is not numerous, and hence the insignificance of this criticism. But we must bear in mind that the few referred to are the very ones who are doing more to make a profession of our work, in our common schools, than all others,—their interests must be recognized. We will go further,—their judgment should be consulted with regard to this subject.

One reason why a greater number of the teachers do not attend our institutes is a lack of proper incentive. In most counties the attendance at institutes is wholly a matter of their own *pleasure*, we say *pleasure* for in this light they view it, and this will be the case so long as there is this lack of incentive.

Another class of our teachers does not attend because they have the impression that "Institutes are for the country teachers." Is it true that the foolishness of the age has also entered our ranks, and are we to have an aristocracy? If we are, let it be genuine, made up of those who are hard workers, and loyal to every principle of our profession.

Can't something be done to cause all of us to be eager for knowledge, and sharp after new ideas. Let us "excommunicate" every teacher who will not from a noble nature, recognize every other worthy teacher as a co-worker. Another evil of the present system is the presentation of impracticable ideas.

It sometimes happens that men are called upon to do institute work who know very little about our common schools. These men go because they are chosen, and they are chosen because they are known to be men of ability, but they do not possess the particular kind of ability needed in institutes. The result is that very much of what they say is as impracticable as were the opinions of Greeley on farming. If we could hear some of the comments made upon our work by the really practical teachers, we would not infrequently take a lower estimate of our untried theories. The simple fact is there are many men in high positions who could not teach a district school for a single term, neither could any one else succeed according to their theories. Again there is a decided lack of enthusiasm at our gatherings. Why is it that some are so formal and precise that the spirit is, if there is a spirit, entirely latent. Better make a grammatical blunder occasionally than to do everything in a spiritless way. Let us create what shall be known as the "Fossil Teacher's Fund," so that a man when he has succeeded in fencing himself in from the rest of the world by refinement and culture can be retired, and give place to others who have some of the "juice of human kindness" in their souls. Can we expect to awaken "professional enthusiasm" in the beings of young

teachers when those who have been "long in the way" are perfectly devoid of it. These criticisms are also applicable to the evening sessions of many of our institutes. Can any one explain why a strong, able-bodied man, after he has mastered his subject, and has arranged his ideas logically and with real elegance, will come before an audience of just a few hundred in one of our rural churches, and persist in *reading* his lecture in such a manner as not to be heard by more than half his audience? Such an effort does not enthuse, it disgusts. The need of the day in our profession is men who can talk as well as think.

Let us draw a picture. An institute is appointed at a village in one of our counties. The people open their houses and hearts, expecting to have a week of rich enjoyment. The night of the lecture arrives. The neat best little church is crowded with men and women of the community; just the occasion when something ought and might be said to tell for the cause of education; the lecture "comes off," and the people "go off," empty as they came; a few heard and said it was grand, but the mass concluded that if education will take the life and energy out of a man so that he can not be heard in that small church, they have no desire for their sons and daughters to be "highly educated." Not the least among our failings is our methods of instruction at our institutes. "Development of the child's mind" is the proclamation from "Objects of Institutes," to "Morals and manners," and still about the only mind "developed" is that of the instructor, for there are few questions asked and no recitations or discussions.

But why consume more time in rehearsing what every institute worker knows to be true.

The business of this hour is, if possible, to devise remedies for these deficiencies. Could not our institutes be made more valuable by lengthening their sessions; make county normals of them. We find nothing in the law which specifies that institutes shall be held only one week. Why not make them four weeks in length, and have a regular "Normal Course" of study, which may be completed in two or three consecutive institutes, and a certificate given when such course is finished that will be of value to the holder. We know the item of expense must not be left out of the question, but could not this be provided for. Two good live men to do all the work in an institute are better than a greater number.

Are there not many competent teachers in this State who would be willing during the vacation months to give their services for one hundred dollars per month and expenses. At this rate two hundred dollars would furnish instruction to a normal for four weeks. Add fifty dollars for expenses, which we think would be sufficient, if men were chosen with reference to location, and the whole expense for a four weeks' normal course, would be $250. Say it costs $300. Can't it be met? If one county could not meet it, then let the State Superintendent appoint one Institute for two or three counties: we understand "section 3," of "chapter 15" of "General School Laws" to give him that privilege. We believe that by this "pooling" process, most of the teachers in the State could be furnished with four weeks' good normal instruction each year; for if we study the railroad and maritime geography of our State, we find that our counties can be grouped in twos or fours so that the teachers in those counties might be almost as well accommodated as though an institute were appointed in each county. Some will hold that teachers will not attend these normals, they would be too expensive; but they *are* attended in some of our sister States. Just let it be known that work done in these nor-

mals will have an important bearing upon the examinations and these prospective normals will be thronged.

Have not county examiners a right to allow a liberal per cent on the examinations of one who has done good work at an Institute? It *is* done and with good effect. Please note: We say the allowance is to be made on the *work done*, not on mere attendance.

We believe that by coöperation between the Superintendent of Public Instruction and the different county boards, that what we have suggested is possible under the present law; if, however, it is not, but still would be for the best if it were possible, then let our Legislature make it possible.

We believe that with "District Normals" instead of "County Institutes," we might in a short time witness a great improvement in the methods and proficiency of our teachers. The number of these would not be so great but that our worthy Superintendent could be in direct communication with them, and could have, with the aid of a few able assistants, direct supervision over them. In this way all "poor" instructors and "dry" lecturers could be given their time for the "much needed" vacation, and our profession would rise in the sphere of its usefulness.

The foregoing seems to us to be the most feasible plan for progression under the present law. If the law would permit it, we think that there is still a better plan. Instead of the Institute fund belonging to the different counties, let it become a State fund. Then State normals could be appointed at those places where they would do the most good, and be easiest of access to the teachers.

Our present system of Institutes costs about eight thousand ($8,000) dollars per annum. Calculating that the four weeks' normal would cost four hundred dollars, the State could have twenty during each summer vacation. Would not greater good come from these than does come from the fifty-five county Institutes?

DISCUSSION OF THE PRECEDING PAPER.

S. G. BURKHEAD said:

For a number of years it has seemed to me that our system of public instruction has been at fault in the fact that while it has produced a fine University and other State schools and encouraged, especially of late years, our intermediate or high schools, and through them greatly incited to good work the lower grades of our union schools and the district schools in the immediate vicinity of them, yet in itself it has almost entirely ignored our poor rural district schools. If we may be rightly said to have a system, the rural district is certainly left out of that system. It is left to the mercy of every individual transient teacher, and, in some districts, they have as many different teachers as they have different terms of school, and sometimes more. Nothing definite being required, some good teachers do comparatively well, considering their tenure of office, while others do very little, and still others may do more harm than good. The good are not appreciated or encouraged and the poor not fully depreciated. Of course, as communities vary in intelligence this condition changes and is not uniform.

Our boasted system does not seem yet to stoop low enough to lift up to the best possible work our country primary schools. Where teachers do succeed at all they succeed in spite of the want of any direct helpful supervision. The mere visit, of a few minutes, of some party elected inspector, who never taught

school a day in his life, and who has no love himself for the work, and who is generally fully occupied with the interests of his own profession, not in any way related to school teaching, is not certainly very helpful. In fact, the dullness of such inspection frequently becomes a source of amusement to the pupils and an annoyance to the teacher.

As long as our system remains so incomplete and the work of these schools undefined and indefinite, the only way to reach them will be through their teachers. It is highly important that the State should secure to them some elementary training in the theory and art of teaching. This, as it seems to me, is the legitimate province of the institute. This was probably the aim of its projectors and friends; it has undoubtedly been the main object of its workers all along. That the institute has accomplished good in the direction of popularizing education, of enthusing some teachers at least with the importance of their calling and with a desire to know more of the ways and means by which they can be more useful; that it has imparted some practical knowledge, and that it has given a great deal more, in the way of suggestions, to be worked out by live teachers, and which has been worked out to some extent, cannot be successfully denied. But it has not done all that we could wish; probably not all its projectors anticipated. It occurs to me that it has done more perhaps than can readily be seen on the surface. We can hardly imagine what our schools would be without it.

I think the work of the institute, especially of the professional part, has greatly improved within the past few years. The work has been more definite and systematic. It has always been criticised; it is still considered defective. Perhaps it may be best for its improvement that it should be thoroughly and critically reviewed. The course of instruction laid down in the syllabus looks well on paper, and I have no fault to find with those who have been sent out from the various seats of learning to give instruction, for, as far as I have had any connection with them, I have considered them good workers, and some of them grand, noble men exerting a good influence. But I hold that it is utterly impossible to do the amount of work required in the short time given it, thoroughly and satisfactorily. I have observed that when instructors have had to go over the whole course and have only required the teachers to take notes of lectures, at the end of the week all were so excessively wearied with the cramming that they seemed relieved and glad when Friday afternoon came, and many say that they scarcely ever look at the notes after being taken. Of course there are some noble exceptions. Some teachers get invaluable hints and suggestions which they are able to expand and exhibit clearly and satisfactorily in their own practice. Besides these, I have no doubt many receive more good than they seem to in the way of unconscious tuition.

To avoid the cramming incident to our present institute system, I suggest that the time of each session be lengthened to two weeks, and that a part of the time be given to teachers for study and reproduction; that the instructors shall not only lecture, but shall test results by daily informal examinations on the subjects presented, and by a thorough examination at the close of the term; and that instead of giving the almost valueless certificate now given, the conductor shall be empowered to give certificates to those only who pass a satisfactory examination, and further that these certificates shall be ready passports to the county examinations. This in itself would secure better attendance at the institute and give value to the certificates, and in every way, in my opinion, enhance the interests of the institute. At present the certificates

only indicate attendance,—no absolute or definite knowledge. They are not valued by the holders, for school examiners seldom give any real credit for their possession.

If examiners are to be generally selected from those outside of the profession of teaching, some of them will continue to be incapable of examining teachers on the subject of theory and art, and it better be delegated to other parties, limiting the examiners to the academic branches. At any rate those who hold these certificates should be exempt from any further examination on this subject.

It is urged that the institute costs more than the results would seem to warrant. This is not the fault of the institute itself, as I look upon it. I have thought sometimes that the funds might be more economically used. I have not been able to see the advantage of sending an instructor a long distance to a remote part of the State to work part of a week, then recalling him and sending another for the balance of the week, thus doubling the railway expenses.

Young teachers must be very fond of novelty, indeed, or the instructor must exceedingly lack in the essential elements of a good teacher himself, if he cannot be endured longer than three days. I only wish to say I cannot understand this part of the policy of our State Superintendent. Variety is the spice of life, but a good instructor is generally best liked when best known, and he can do more in an institute after he becomes acquainted than he can the first day or two, and a good institute will grow in interest and value, day after day, as the instructors and teachers become acquainted and in sympathy with each other, and more and more in love with their work.

In our part of the State, the Grand Traverse region, so far from any State normal school, there is a great demand for normal classes, not only for professional training, but for reviews; and in my own experience I have been better satisfied with results obtained by giving methods of teaching, together with reviews. I am well aware that theoretically it is well to have teachers well grounded in the branches to be taught before giving them professional instruction. I think, however, most normal schools find it necessary to insist upon some reviews, especially of the common branches. Be this as it may, teachers for our country schools come to us for reviews, anticipating the county examinations; and why not take advantage of the demand and judiciously lead them into the best practical methods, giving them at the same time a desire for deeper work in the fundamental principles of true education according to individual capacity for appropriating. In my own school I conduct such a class three months in the year—two in the fall and one in spring, judging from the rapidity with which these classes increase in numbers, I conclude there must be a growing demand for such labor. Why could not the State well afford to encourage the forming of such classes, as far as practicable, in every county in the State, to furnish at least the instruction in theory and art? In every county wherein there is a good graded school let the county normal be connected with it, so that reviews, professional instruction, and observation may go hand in hand, and at the least possible expense.

The normal term, if held but once a year, should continue at least nine weeks, and be held in the fall, to prepare for the rural schools which generally begin in November. This time would give the week to each branch, and I have always made it a rule to have but one branch under consideration at a time, holding an examination after each week's work, showing to those who were not

quite up to the required standing that it would be expedient for them to join some regular class in school for longer review. A school well managed, in regular running order, in the hands of the regular teachers, affords excellent opportunities for observation. Here they may unite the reviews, theories, and observation in actual practice. In counties where there are no union schools this opportunity of observation would be wanting, but no less wanting than at our usual institutes. In many counties perhaps a sufficient number of children could be collected for a school of practice, if allowed their tuition for two or three months.

The plan of uniting two or more counties in one normal would hardly be practical, I think, unless in the sparsely settled part of the State. There would be, or ought to be, enough generally in one county to form a class as large as could well be accommodated with room in any of our ordinary school buildings, and, of course, it would not be policy to build especially for county normals at present. They would have to grow into special favor with the people before this could be done.

It has been pressed upon our attention that one of the defects of the institute system is that there is no incentive for work at institutes. While I believe that every true teacher has incentives enough within himself to lead him to labor, I think attainments in the professional department of a teacher's work should be more readily recognized by school officers and examiners. Legal certificates, as I have before suggested, would I think supply this incentive.

I would suggest that the examining boards are the proper officials to take special interest in the county normals if we should have them, and that they should unite with the instructors in the examinations and legalize the certificates given, and that every inexperienced teacher should be required to hold such a normal certificate. I think it exceedingly desirable that the examiners be persons well qualified to give the instruction. They should at least assist, making the work as practical as possible, best knowing the wants of their schools.

Complaint is made because of the repetition from year to year of the same theories in our institutes. Whether this is really a defect depends upon circumstances. If the theories are correct, and a new set of inexperienced teachers arise every year to receive instruction, I cannot see that it is a defect. Neither novelty nor amusement should characterize our institute or county normal without reason. Teachers should attend, expecting and being required to work; putting, as may be, as much music and enthusiasm into the work as possible.

For some of the teachers who are experienced and somewhat advanced in theory and art, to whom the repetition of things gone over would be wearisome, I would recommend a more advanced course, thus encouraging growth. This would have something of the effect of a high school on grades below. The upper grade would stimulate the lower, and give character to the normal. The two grades of work need not take any more room, time, nor teaching force than the one, for while one occupied the lecture room, the other could study at their room, making the work as much like a real school as possible. These two grades would accommodate most of the teachers who would attend. The few above these could seek self improvement, in advanced reading, study, regular normal schools, summer schools for teachers, etc. The world is wide and a normal school in itself.

To summarize:

1. Our system should embrace more practically the lowest of our country schools. They should be systematically graded and superintended.

2. Instead of one short week for institute instruction, there should be several weeks of real normal school work.

3. The normal instruction should be graded to suit the wants of those to be instructed.

4. Definite requirements should be made of the teachers, and valuable recognition should be given to those who do the work well and pass satisfactory examinations.

5. Time, money, and means should be economically employed, to be made the most useful possible.

N. P. COLLINS said:

While I should be extremely glad to see the county institute grow into a county normal, yet it seems to me much more can be made of the institute.

If specialists in the various branches were selected to give instruction in them and not a professor of Greek sent to teach reading, or an expert in mathematics to teach penmanship (I mention these extremes so as not to hit any body), the instruction given would be more natural, practical, and, of course, more interesting and profitable.

Again, if one of the principal exercises of the institute should be the detailing of personal experience in school management, mentioning the plans followed which have not produced satisfactory results, and stating reasons why, and especially setting forth whatever has been found to be valuable in promoting more pleasant and friendly relations between teacher and pupils and in securing better order and better scholarship, we might all go away enlightened and greatly profited.

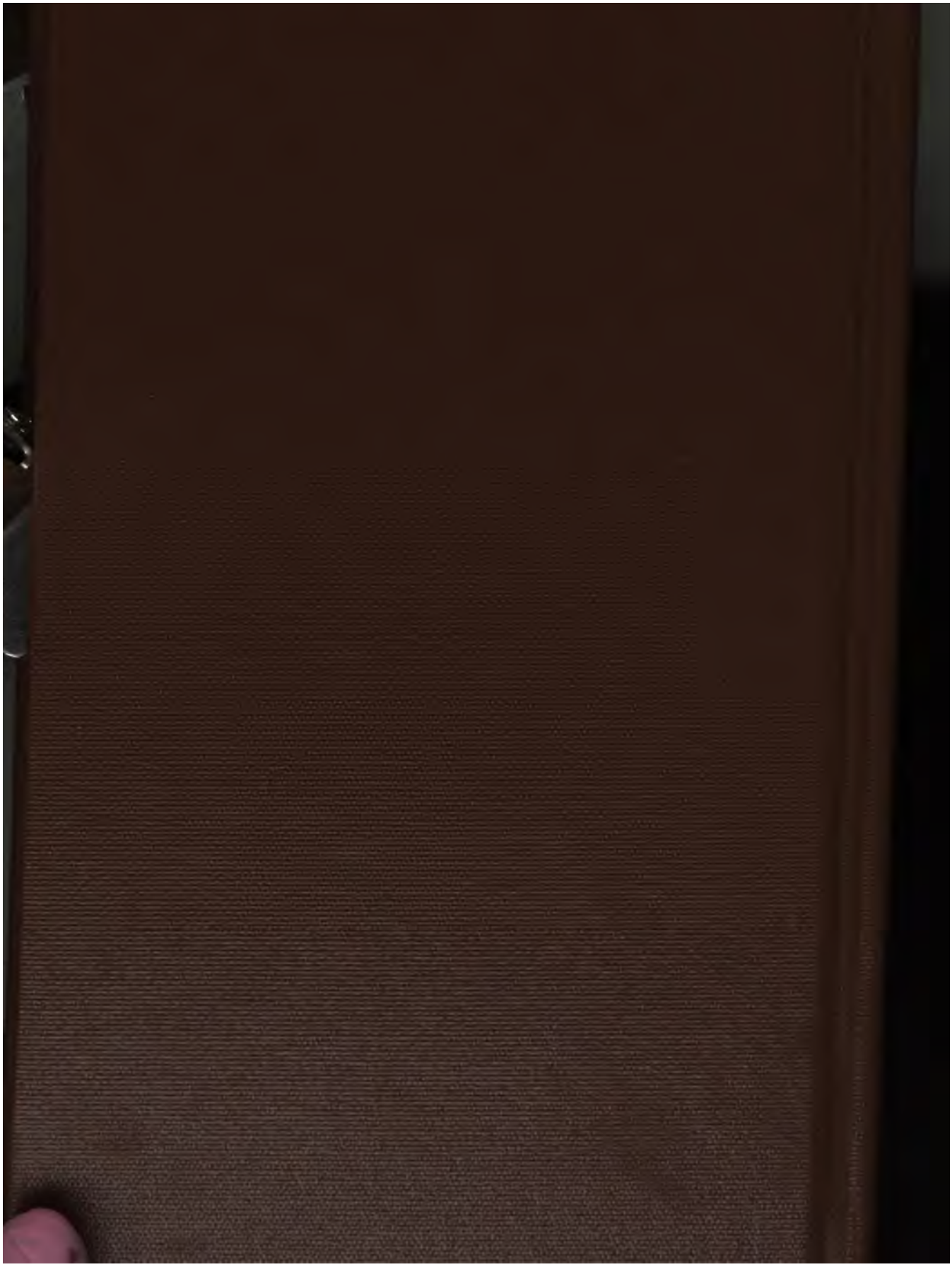
Let us make good use of what we have.

J. W. EWING said:

The present institute law has been in operation but a short time, and should not be condemned. Give it a fair trial. An institute of a week is better than none.

When the proper time comes, one change should be made in the present law requiring all who apply for certificates to pay the *institute fee*, whether they receive a certificate or not. It is just as much trouble for the examiners to look over the papers of those who fail as of those who succeed, and oftentimes more. If any one wishes to try for a certificate let him pay. The Ohio law requires all who enroll as applicants to pay the institute fee. This is as it should be.

From my observation of county normals in Iowa and Illinois, I consider them an improvement on the institute. The question of expense can be provided for by charging a small tuition fee of those who attend, to supplement the institute fund. Teachers will be likely to derive more benefit if it costs them something. I am in favor of a gradual introduction of the county normal. It has worked well in other States, and there is no reason why it would not do the same in Michigan.

H. R. PATTENGILL said:

It seems to me that the gentleman who just took his seat is mistaken in regard to city teachers not paying the institute or examination fee. I believe